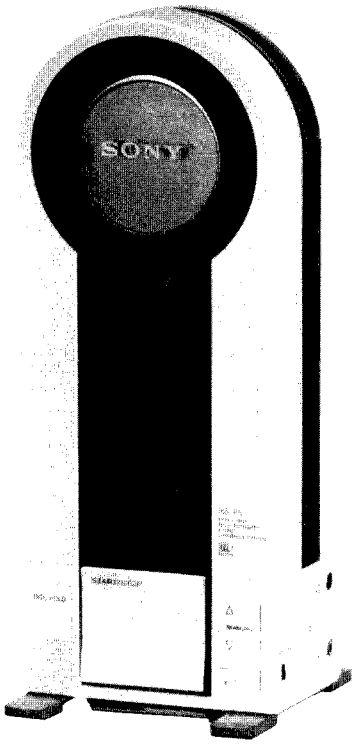
PS-F9

SERVICE MANUAL



Canadian Model
AEP Model
E Model

SPECIFICATIONS

Turntable

Platter	9.15 cm (3 5/8 in.), strontium-ferrite
Motor	Linear torque BSL (brushless and slotless) motor
Drive system	Direct drive
Control system	Quartz lock variable reluctance control system
Speed	33⅓ rpm, 45 rpm
Starting characteristics	Comes to nominal speed within a half revolution (33⅓ rpm)
Wow and flutter	0.06% (WRMS)* ±0.14% (DIN)*
Signal-to-noise ratio	62 dB (DIN B)
Speed deviation	Within 0.003%
Automatic system	Lead-in, return, reject, arm up/down

Tonearm

Type	Dynamic balanced, linear tracking, low mass type
Pivot-to-stylus length	37.5 mm (1½ in.)

Cartridge (VL-44G)

Type	Moving magnet type
Frequency response	20–20,000 Hz ±3 dB
Channel separation	20 dB at 1 kHz
Output voltage	2.3 mV (1 kHz, 3.54 cm/s)
Tracking force	1.7 g
Stylus	Sony ND-144G (0.6 mil diamond)

Amplifier section

Outputs

LINE OUT (stereo minijack)
Voltage 250 mV
Impedance less than 4.7 kOhms
PHONES A,B (stereo minijacks)
Power output 20 mW + 20 mW
(at 10% harmonic distortion, 32 ohms load)
Load impedance 8–300 ohms

General

Battery life (output 0.5 mW + 0.5 mW, headphones, 30 cm records, 33⅓ rpm, continuous record play in the horizontal position) (hours)

Sony New Super battery SUM-3 (NS) (Eveready Heavy Duty battery No. 1215)	3
Eveready Alkaline battery No. E91	7

Power requirements

6 V dc; four batteries, IEC designation R6 (size AA)
Rechargeable battery pack BP-61 (optional)
DC IN 6 V jack accepts;
AC power adaptor:
Refer to the following chart to choose the correct adaptor for your area.

Country	AC power line voltage	Optional ac power adaptor
Canada	120 V ac, 60 Hz	AC-9 available in Canada
Continental European countries	220 V ac, 50 Hz	AC-456C available in Continental European countries
Other countries	120 V ac (110, 220 or 240 V ac, adjustable by Sony personnel), 50/60 Hz	AC-4A available in Japan
	110, 120, 220 or 240 V ac, adjustable, 50/60 Hz	AC-4A available in other countries

Car battery cord (optional)
DCC-127A for use on 12 V car battery

Dimensions: Approx. 108 × 263 × 73 mm (w/h/d) (4 3/8 × 10 3/8 × 2 7/8 in.) incl. projecting parts and controls

Weight: Approx. 1.7 kg (3 lb 12 oz) incl. batteries

MICROFILM

STEREO TURNTABLE SYSTEM

SONY®

AUD

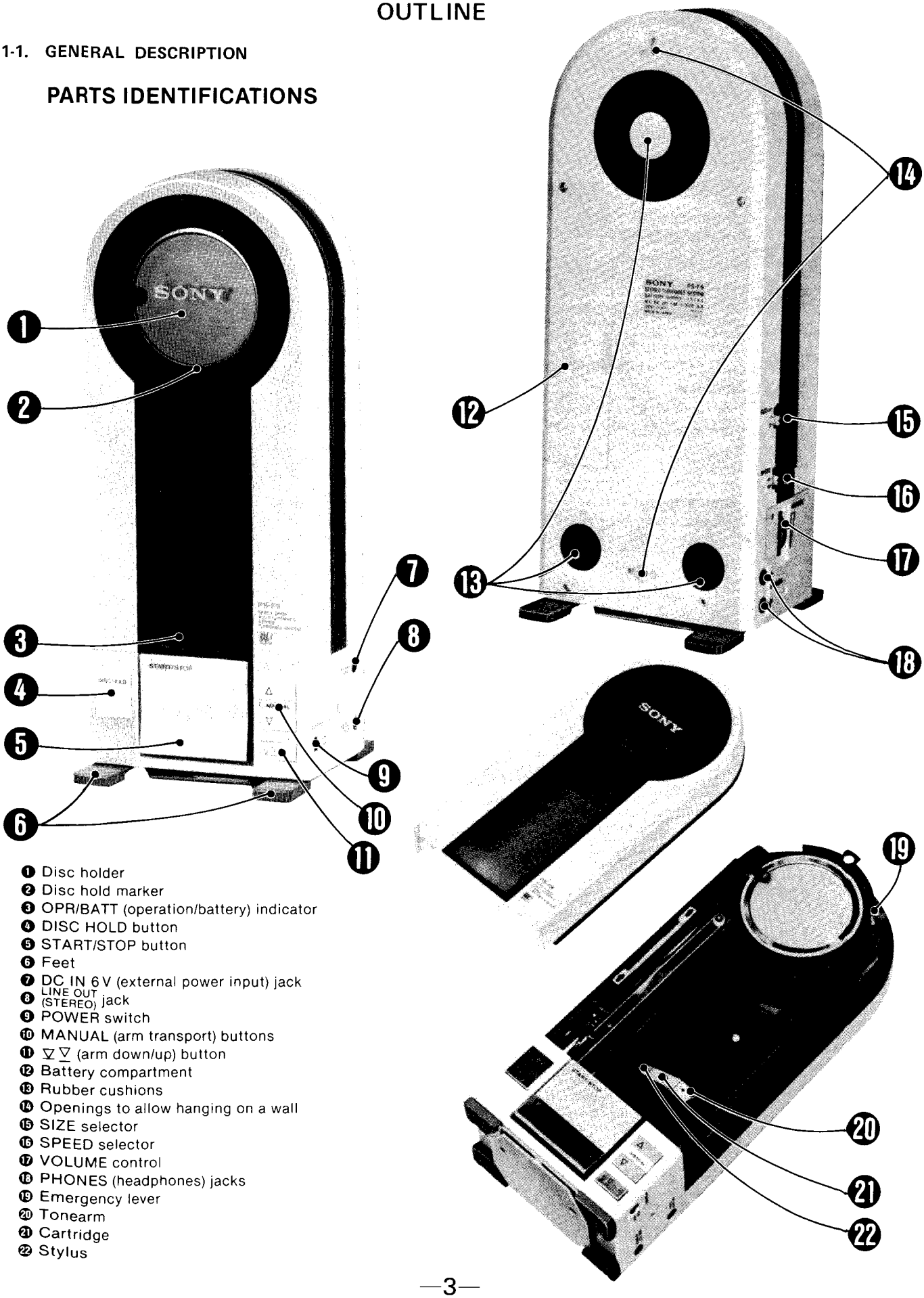
FEATURES

- You can take the PS-F9 with you anywhere, since the set is compact and lightweight, and operates on batteries. Its smart, innovative design allows it to be used standing upright, lying down or hanging on a wall.
- The PS-F9's built-in headphone amplifier allows two pairs of headphones to be connected directly to the set, while the built-in equalizer amplifier allows the set to be connected directly to an amplifier or a radio cassette recorder.
- This turntable system is equipped with a linear tracking tonearm. You do not have to adjust tonearm balance.
- The linear torque BSL (brushless and slotless) direct drive servo motor has a high signal-to-noise ratio.
- The turntable maintains an accurate and drift-free speed by referring to a frequency generated by a very stable quartz oscillator.
- When you select the record size and speed and set the record in the disc holder, automatic record play and stylus up/down are operated by the "feather-touch" function buttons. When the play is finished, the tonearm automatically returns to the rest position.
- A muting system activates when the tonearm is lifted and is deactivated after the tonearm lowers onto a record so there is no need to turn the volume down every time the stylus is placed on a record.
- A record cleaning brush built under the tonearm cleans the surface of the record while it is playing.

SECTION 1
OUTLINE

1-1. GENERAL DESCRIPTION

PARTS IDENTIFICATIONS



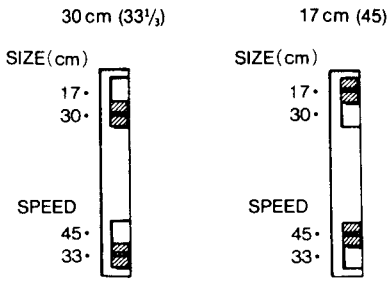
❶ Disc holder
❷ Disc hold marker
❸ OPR/BATT (operation/battery) indicator
❹ DISC HOLD button
❺ START/STOP button
❻ Feet
❼ DC IN 6 V (external power input) jack
❽ LINE OUT (STEREO) jack
❾ POWER switch
❿ MANUAL (arm transport) buttons
⓫ ▽△ (arm down/up) button
⓬ Battery compartment
⓭ Rubber cushions
⓮ Openings to allow hanging on a wall
⓯ SIZE selector
⓰ SPEED selector
⓱ VOLUME control
⓲ PHONES (headphones) jacks
⓳ Emergency lever
⓴ Tonearm
㉑ Cartridge
㉒ Stylus

RECORD PLAYING

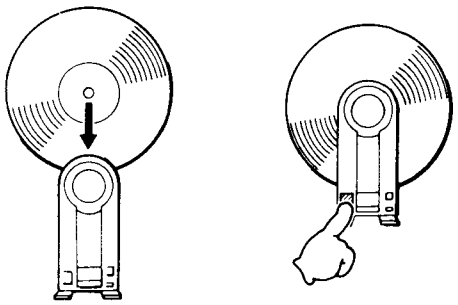
AUTO PLAY

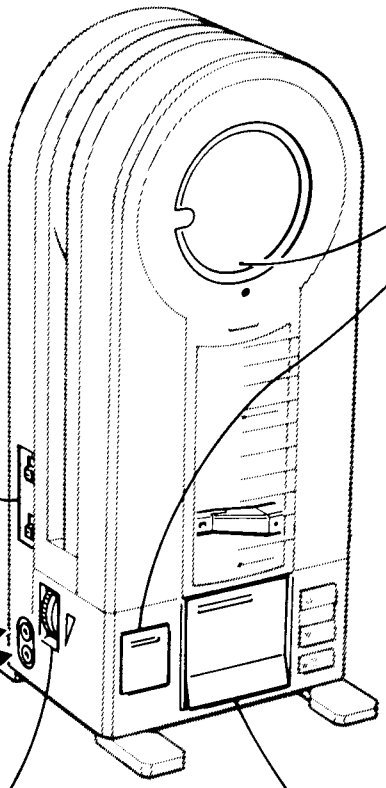
Before starting, remove the dust guard band and set the POWER switch to ON.

2 Set the SIZE selector and the SPEED selector depending on the record.



3 Make sure that the disc holder is open. Insert the record with the desired side facing you and press the DISC HOLD button. Make sure that the record is supported correctly by observing the disc hold marker. In general 17-cm records can be played without a hole adaptor.

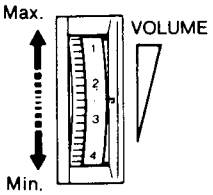




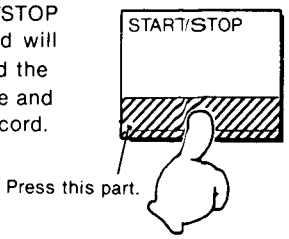
1 Connect the headphones with a stereo miniplug to PHONES jack.

PHONES

5 Adjust the volume.



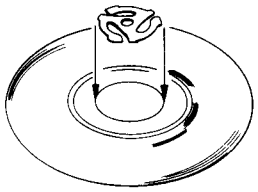
4 Press the START/STOP button. The record will start rotating, and the tonearm will move and lower onto the record. Play will begin.



When the tonearm reaches the end of the record, the record will stop rotating and the tonearm will automatically return.

Notes

- Do not let your hand or objects nearby touch the record during play.
- 25-cm records cannot be played.
- If the record is badly warped, it may be impossible to play it because the rotation will be distorted.
- If a 17-cm record does not rotate or rotates irregularly, use the supplied 45-rpm adaptor.



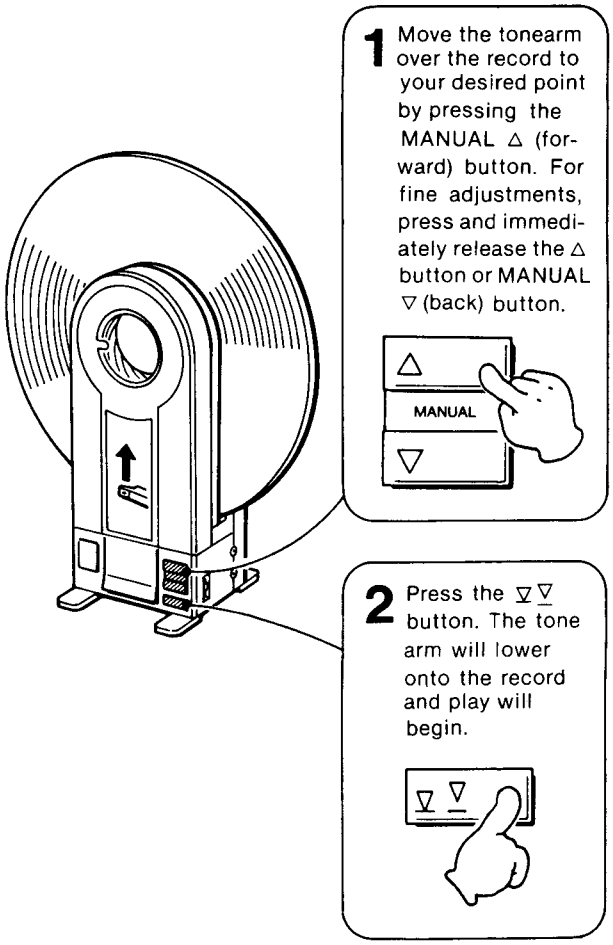
- If a 30-cm record rotation is irregular or distorted sound is heard when the PS-F9 stands upright, play the record with the PS-F9 in the horizontal position.
- You can connect a second pair of stereo headphones having the same impedance as the first one to the extra PHONES jack.
- If your headphones are equipped with a stereo phone plug, use an optional Sony PC-33 plug adaptor (stereo miniplug ⟷ stereo phone jack).

About the POWER switch

Normally set this switch to ON. Set to OFF when you carry the set. Even if you touch the function buttons inadvertently, power will not be supplied.

Do not set it to OFF before the tonearm returns. If you do so, the next time you set it to ON and press the function button, the tonearm will automatically start returning, but play will not begin. If this happens, press the START/STOP button again after the tonearm has returned.

TO BEGIN RECORD PLAY AT A PARTICULAR POINT


1 Move the tonearm over the record to your desired point by pressing the MANUAL △ (forward) button. For fine adjustments, press and immediately release the △ button or MANUAL ▽ (back) button.
MANUAL
2 Press the ▽▽ button. The tone arm will lower onto the record and play will begin.
▽▽

When the tonearm reaches the end of the record, the record will stop rotating and the tonearm will return to its rest position.

TO STOP DURING PLAY

Press the START/STOP button. The record rotation will stop and the tonearm will return to its rest position.

To start the play again, press the START/STOP button after the tonearm has returned.

TO LIFT UP THE TONEARM DURING PLAY

Press the ▽▽ button. The tonearm lifts up from the record while the record is rotating. You can restart the play at about the same point by pressing the ▽▽ button again. This is useful when you want to stop the play briefly.

TO MOVE TO A DIFFERENT PART OF A RECORD DURING PLAY

1 Move the tonearm to another point by pressing the MANUAL △ or ▽ button. To play a selection ahead, press the △ button. To play a previous selection, press the ▽ button.
2 Press the ▽▽ button. The tonearm will lower onto the record and play will begin.

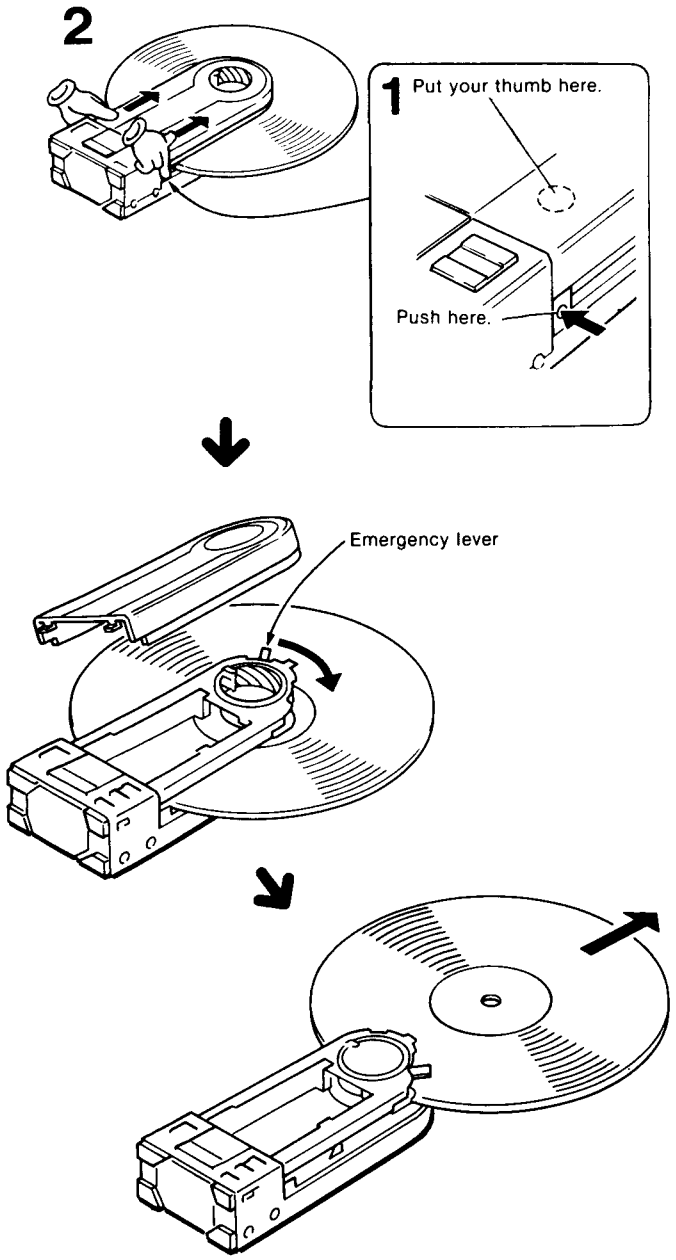
WHEN PLAY IS FINISHED

Press the DISC HOLD button to remove the record. Remember to replace the supplied dust guard band on the set.

How to remove the record when the DISC HOLD button is inoperative because the batteries are weak or the power supply is cut off by accident

Remove all the batteries and disconnect the ac power adaptor or the car battery cord from the DC IN 6 V jack.

Press the PUSH marks on both sides of the set with your forefingers and slide the cover off with your thumbs, then release the holder by turning the emergency lever.

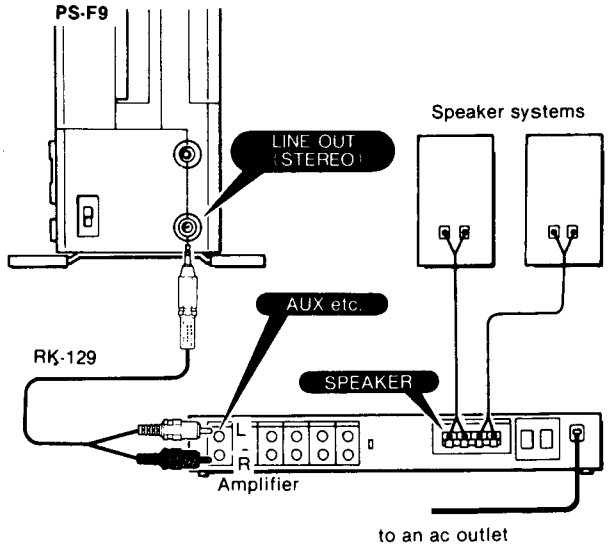


CONNECTIONS

- Turn off the amplifier or a radio cassette recorder before making connections.
- Be sure to insert the cable connectors firmly into the jacks. Loose connections may cause hum and noise.
- Leave a little slack in the connecting cord to allow for inadvertent shock or vibration.
- Use the supplied RK-129 connecting cord.
  White phono plug ..... to L terminal
  Red phono plug ..... to R terminal

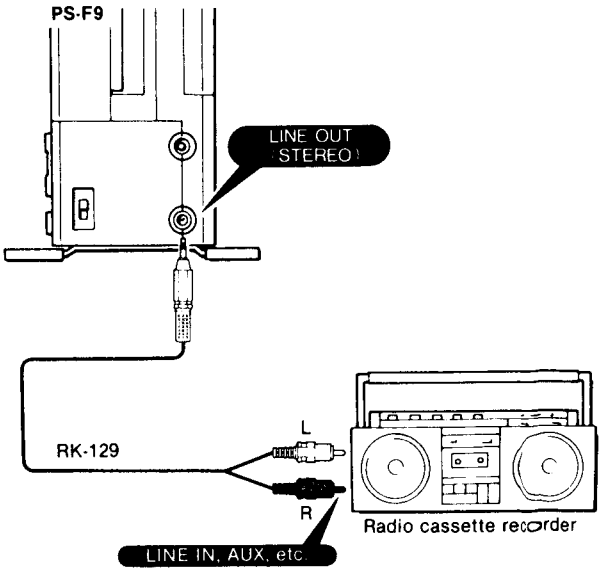
TO CONNECT TO AN AMPLIFIER

Connect the RK-129 connecting cord to AUX jacks.
Set the function switches of the amplifier to AUX to select auxiliary programs.

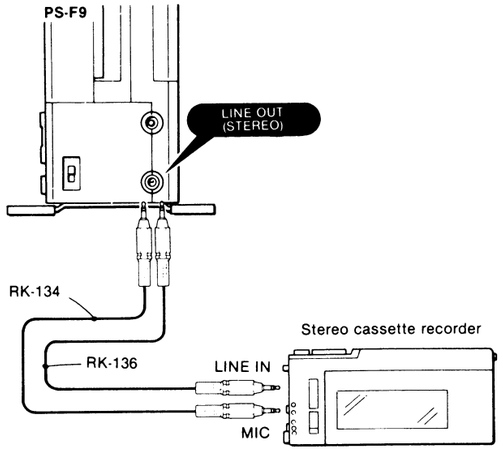


TO CONNECT TO A RADIO CASSETTE RECORDER

If your radio cassette recorder is equipped with a LINE IN/PHONO input selector, set it to LINE IN.
The program on a disc can be recorded on a radio cassette recorder.



A smali stereo cassette recorder can also be connected. If the cassette recorder is equipped with a LINE IN jack (stereo minijack), use an optional Sony RK-136 connecting cord. If the cassette recorder is equipped with a MIC jack (stereo minijack), use an optional Sony RK-134 connecting cord.



MAINTENANCE

Stylus

Before playing a record, clean the stylus with a soft brush or the supplied brush.

While pulling out the cover in the direction of the ❶ arrows with your forefingers, slide the cover off in the direction of the ❷ arrows with your thumbs (**1**). As soon as the tone arm lowers, set the POWER switch to OFF (**5**), then detach the cartridge. Brush the stylus from back to front. Never attempt to clean the stylus with your finger tip. If a fluid stylus cleaner is used, make sure not to moisten the stylus too much.

Replacing the stylus

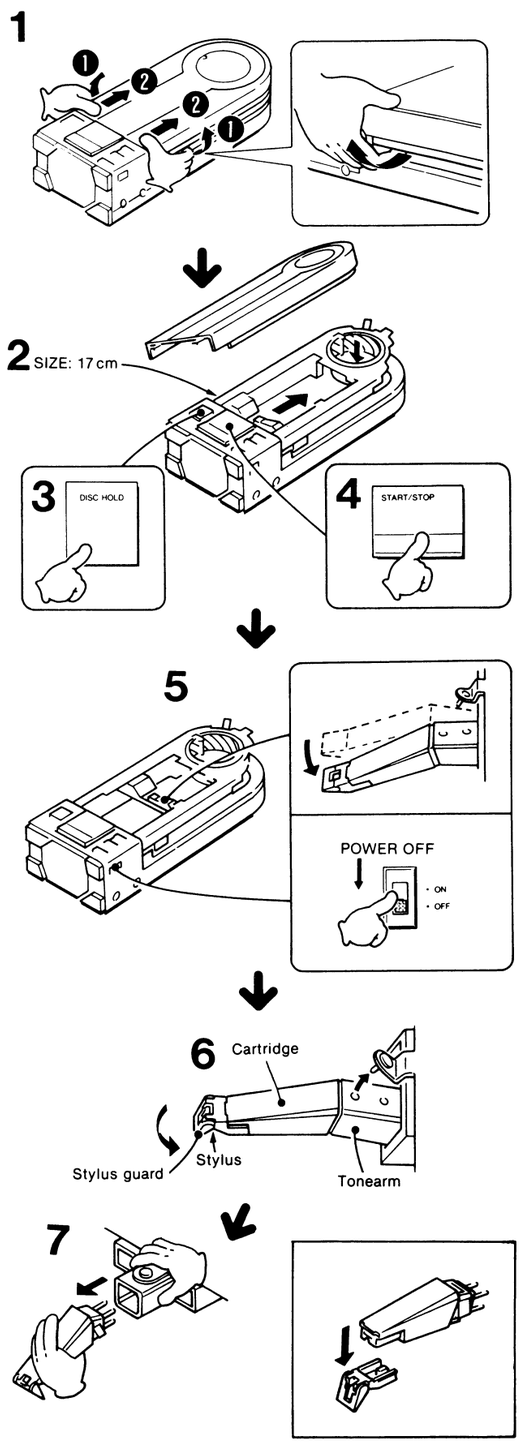
Replace the stylus every 400 hours of use. For the replacement stylus, use the Sony ND-144G (optional).

Handle the stylus carefully as it is very delicate.

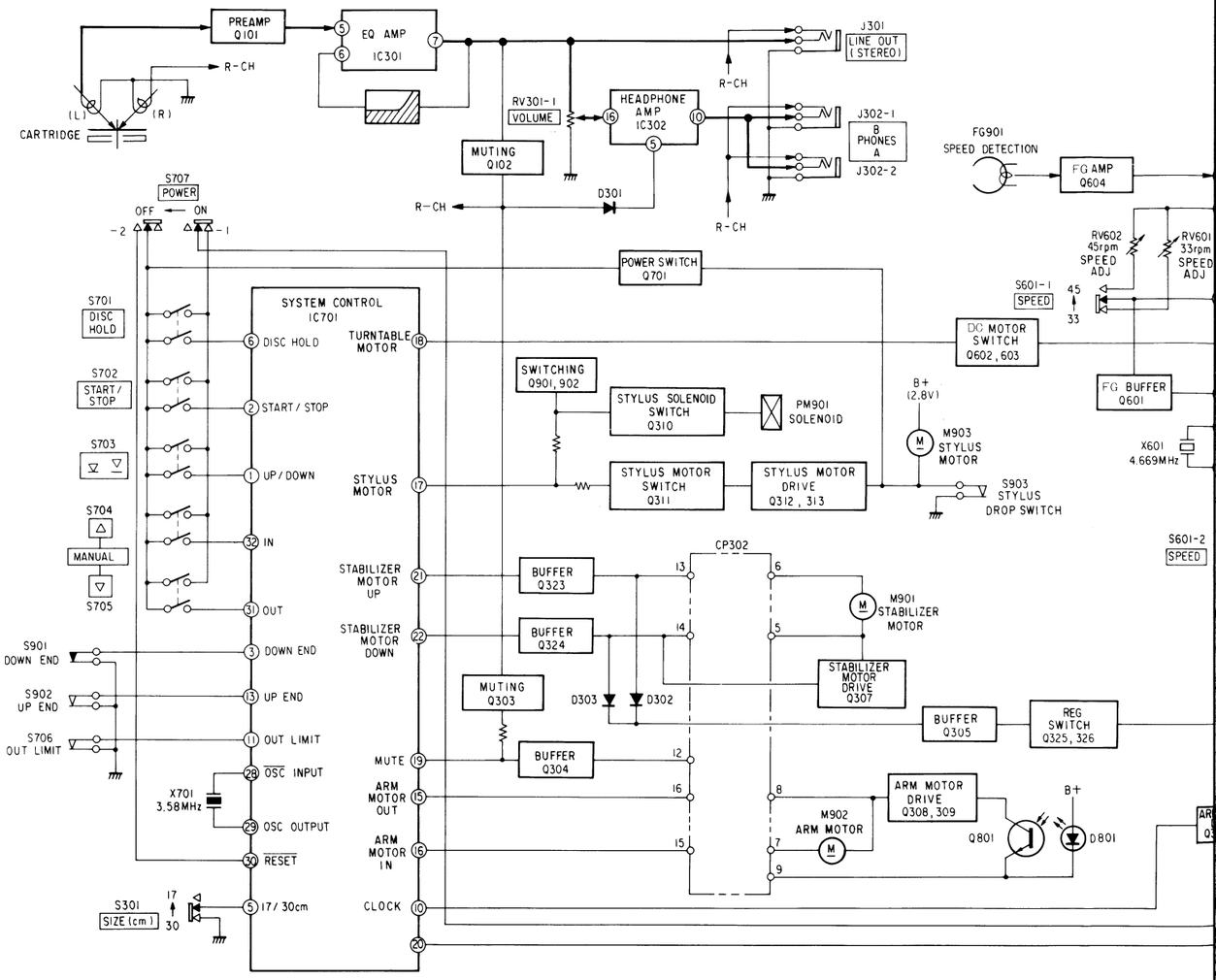
Install a new replacement stylus in the cartridge and then plug the cartridge into the tonearm. Return the tonearm to its rest position and replace the cover.

If there is a line of dust running across the record

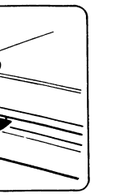
A line of dust appearing on the record after the record has been played has probably been left there by the dusty record cleaning brush (which is under the tonearm). Clean the record cleaning brush with the supplied small brush.

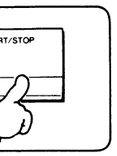


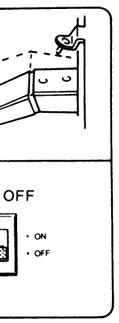
1-2. BLOCK DIAGRAM

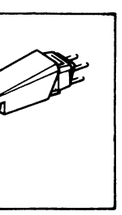


1-2. BLOCK DIAGRAM







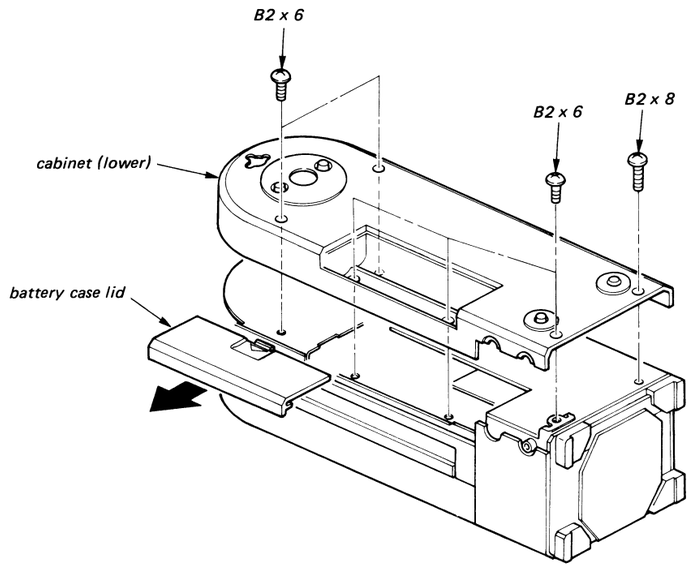


SECTION 2
DISASSEMBLY

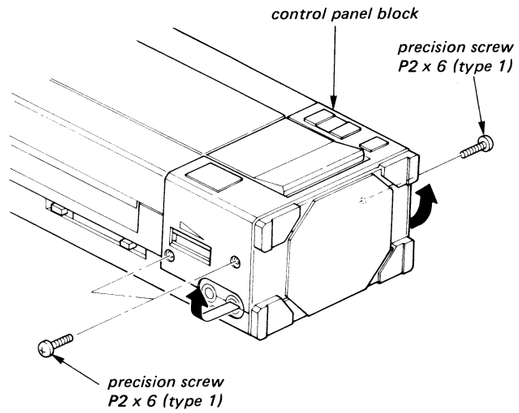
2-1. REMOVAL

Note: Follow the disassembly procedure in the numerical order given.

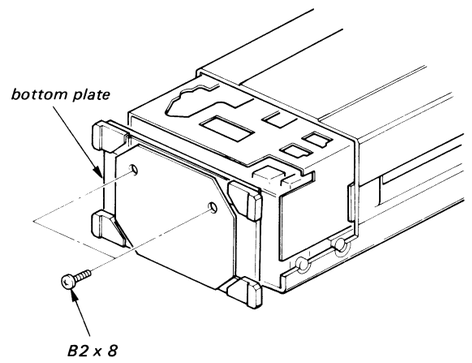
CABINET (LOWER)



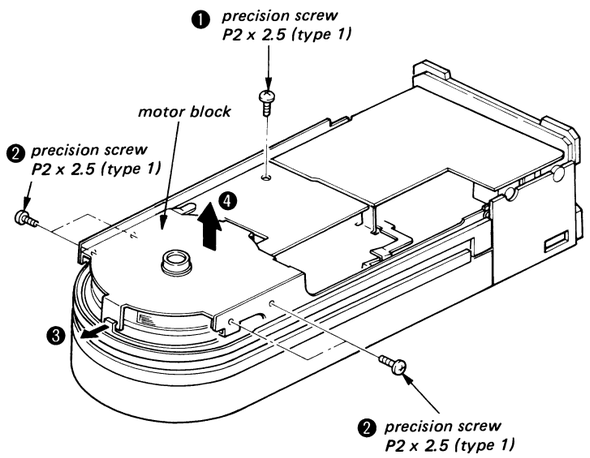
CONTROL PANEL BLOCK



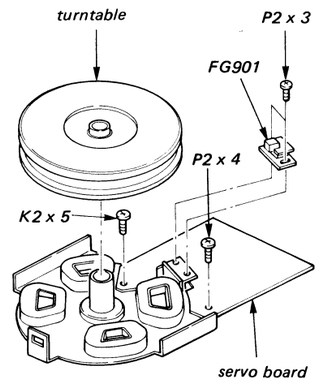
BOTTOM PLATE



MOTOR BLOCK

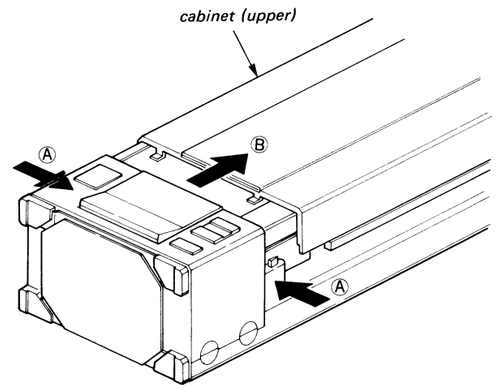


SERVO BOARD

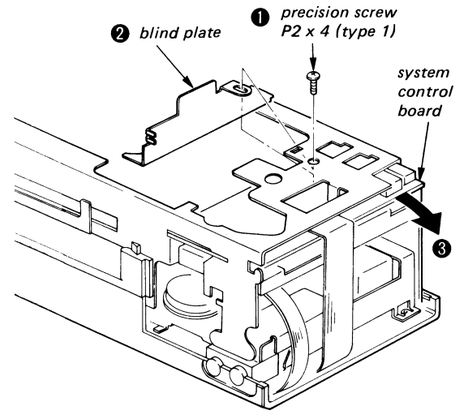


CABINET (UPPER)

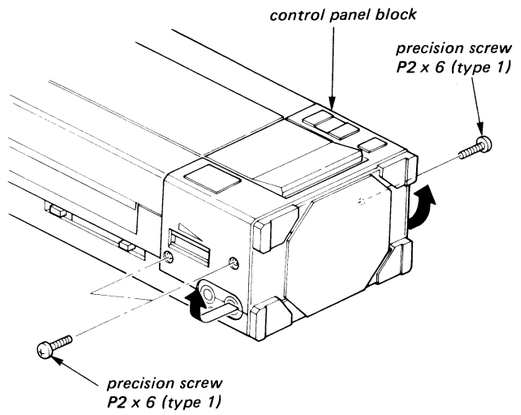
Remove the cabinet (upper) in the direction of arrow Ⓑ while pressing in the direction of arrows Ⓐ.



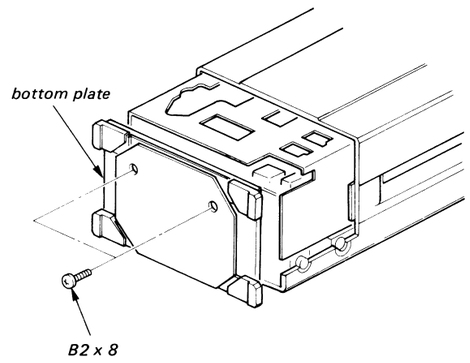
SYSTEM CONTROL BOARD



CONTROL PANEL BLOCK

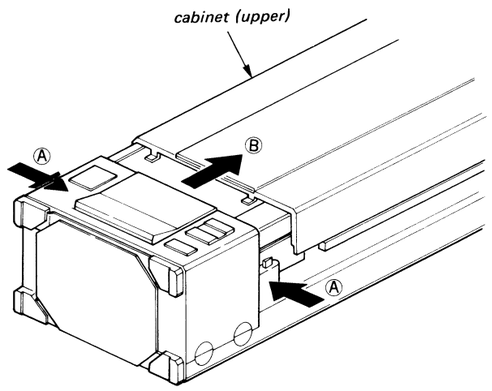


BOTTOM PLATE

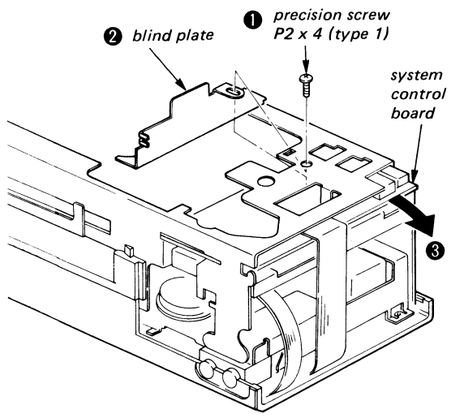


CABINET (UPPER)

Remove the cabinet (upper) in the direction of arrow Ⓑ while pressing in the direction of arrows Ⓐ.



SYSTEM CONTROL BOARD



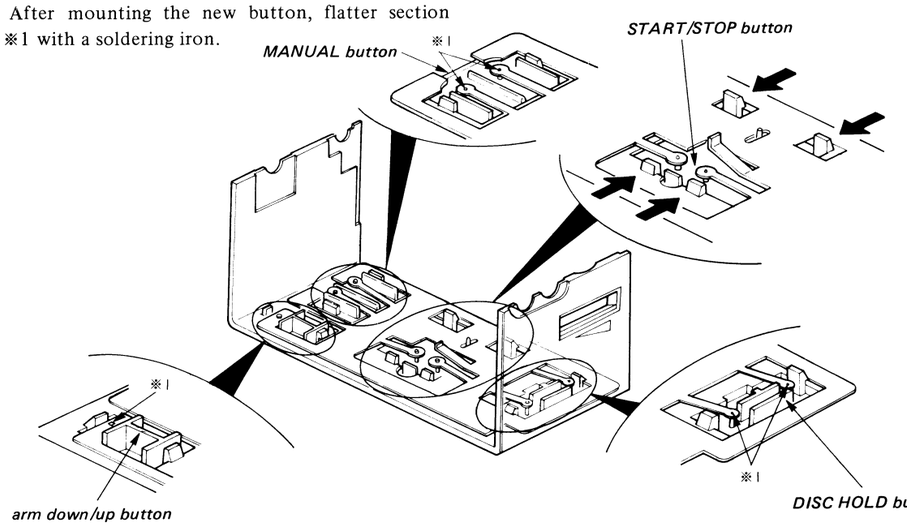
CONTROL BUTTON REPLACEMENT

– Arm down/up, MANUAL, DISC HOLD button replacement –

1. Remove the deposit at the section marked ※1 on the button to be replaced with a soldering iron or nippers.
2. Lift the button up to remove and replace with a new one.
3. After mounting the new button, flatter section ※1 with a soldering iron.

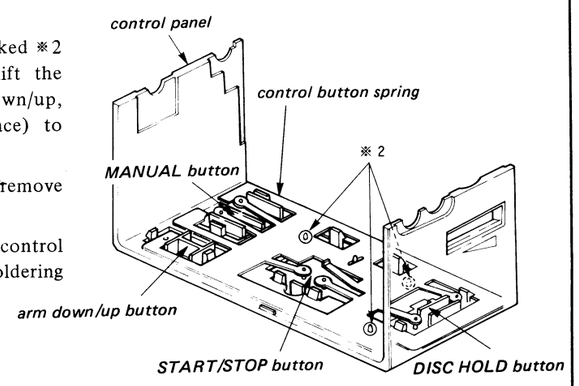
– START/STOP button replacement –

Pull the button down to remove while pressing the claws in the direction of the arrows.

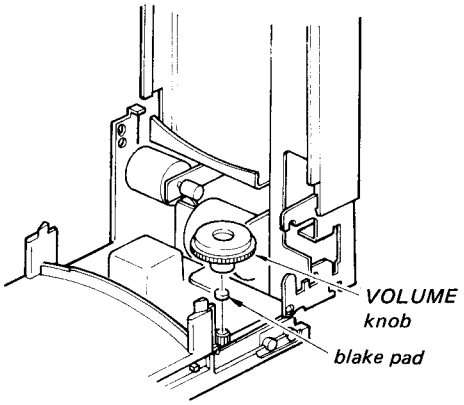


CONTROL PANEL REPLACEMENT

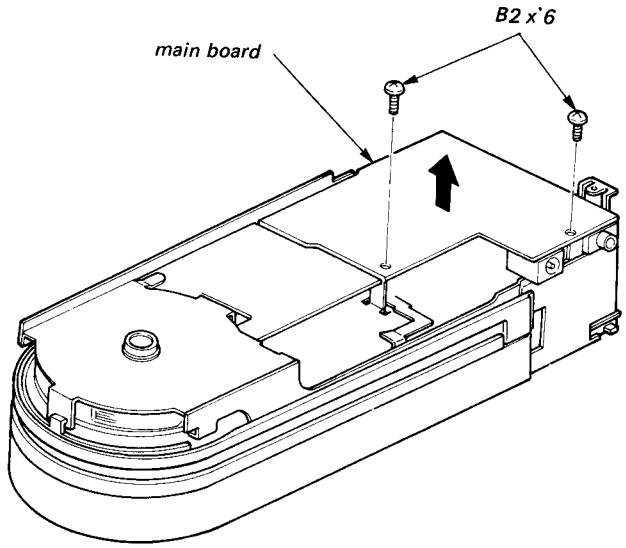
1. Remove the deposit at the section marked ※2 with a soldering iron or nippers, and lift the control button spring up (with arm down/up, MANUAL, DISC HOLD buttons in place) to remove.
2. Pull the START/STOP button down to remove and replace the control panel.
3. After mounting the control buttons and control button spring, flatten section ※2 with a soldering iron.

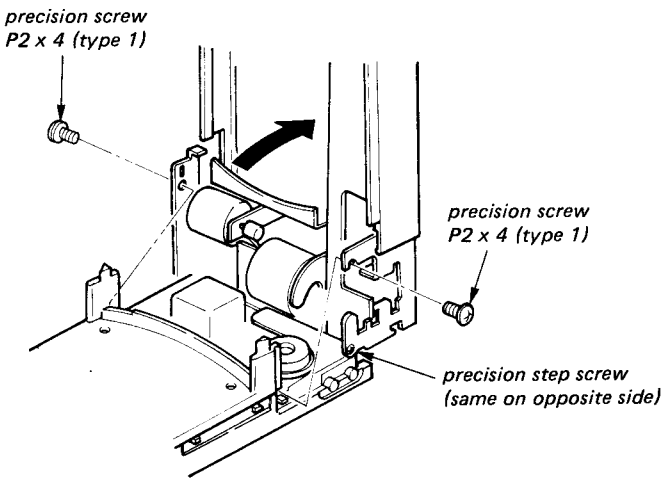


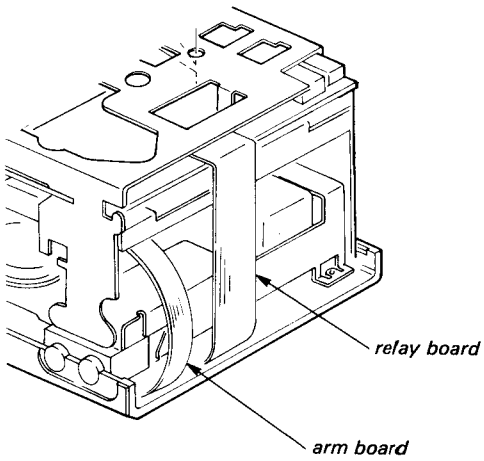
VOLUME KNOB



MAIN BOARD

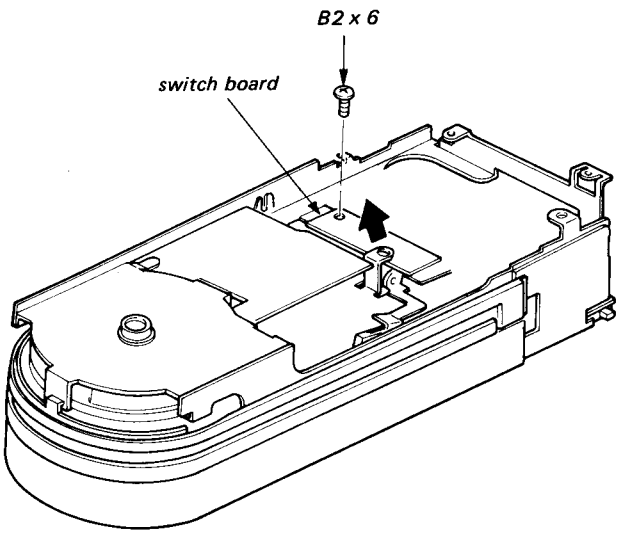




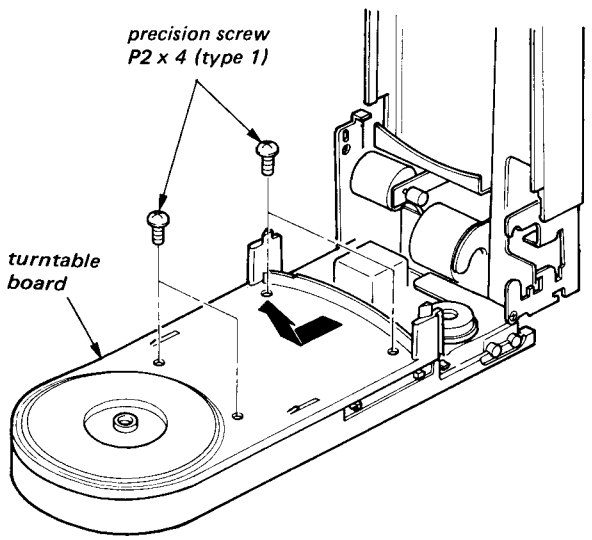


Note: In order to prevent damage to the arm board and relay board (flexible board) do not remove the two precision step screws carelessly.

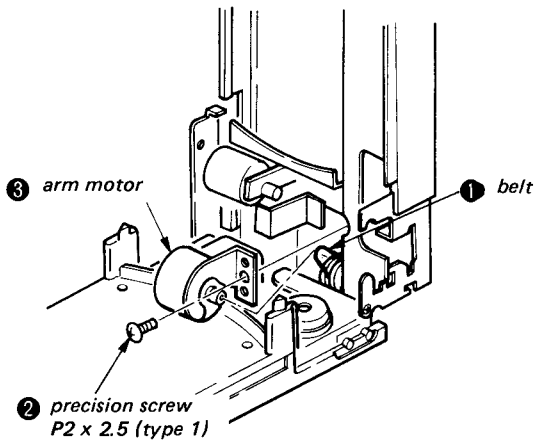
SWITCH BOARD



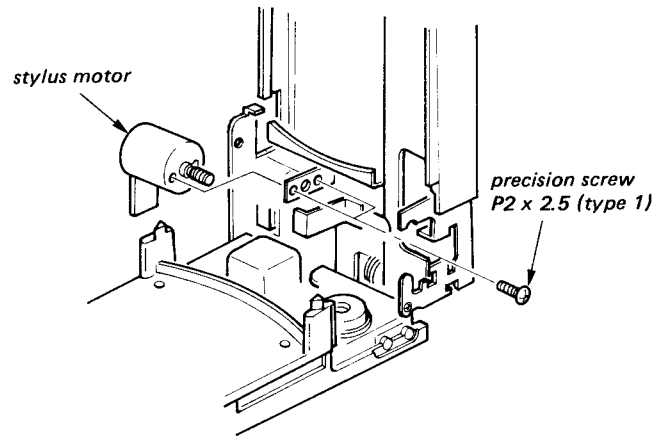
TURNTABLE BOARD



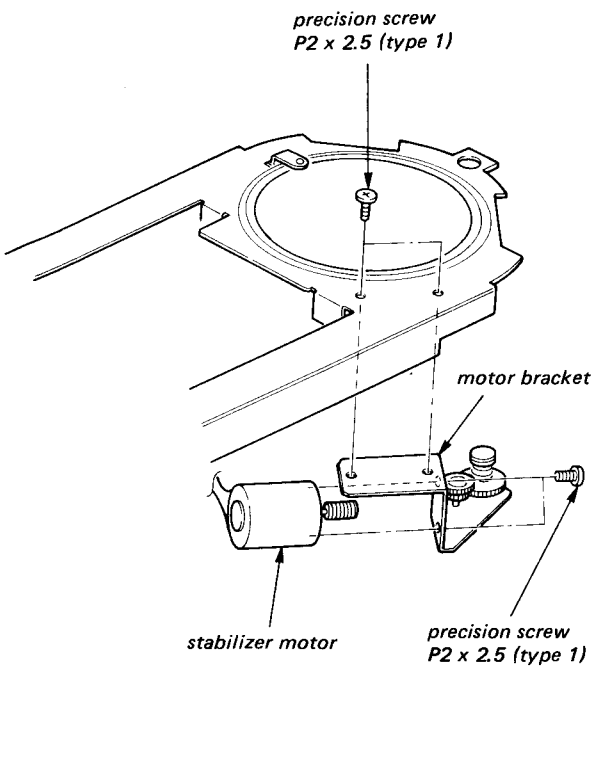
ARM MOTOR



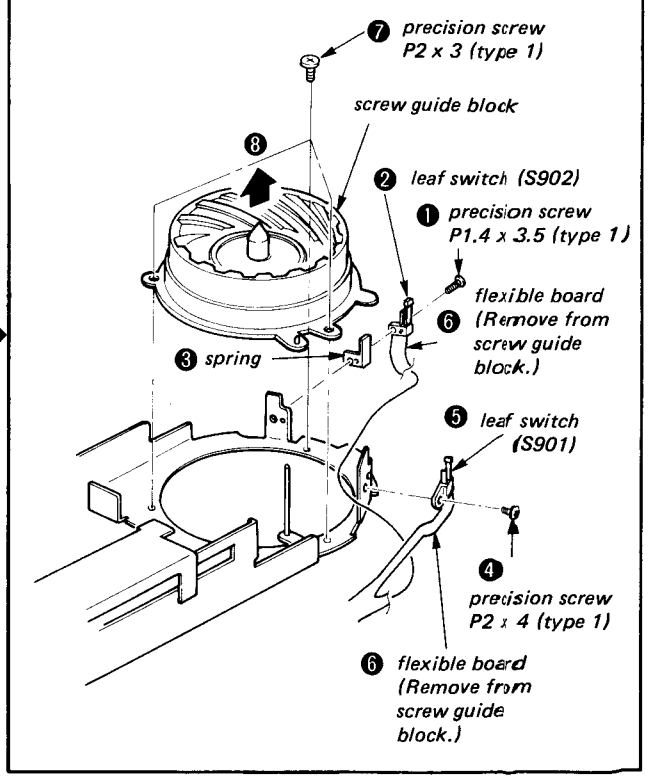
STYLUS MOTOR



STABILIZER MOTOR

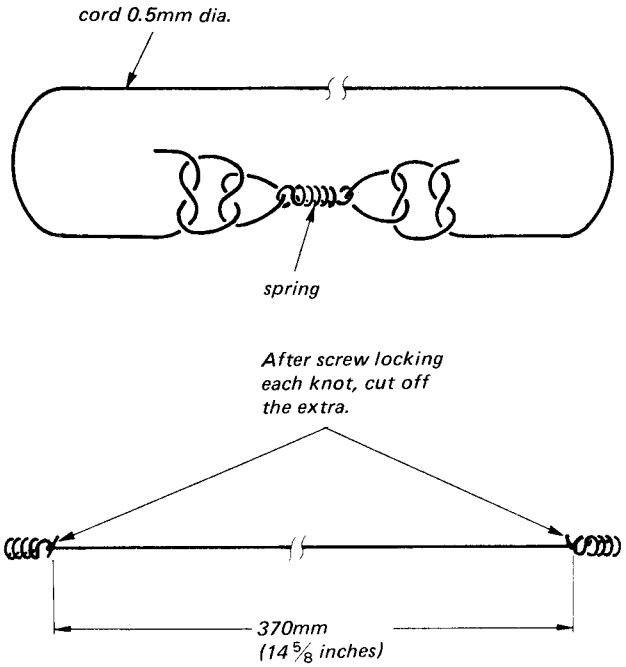


SCREW GUIDE BLOCK



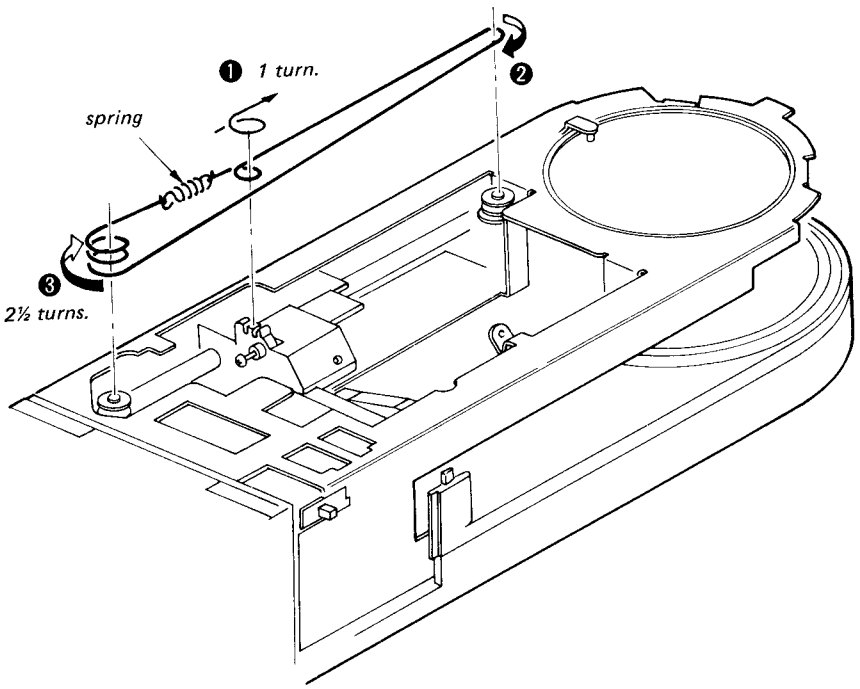
2-2. CORD STRINGING

1. Cord Preparation



2. Cord Stringing

String the cord in order from ❶ – ❸ .

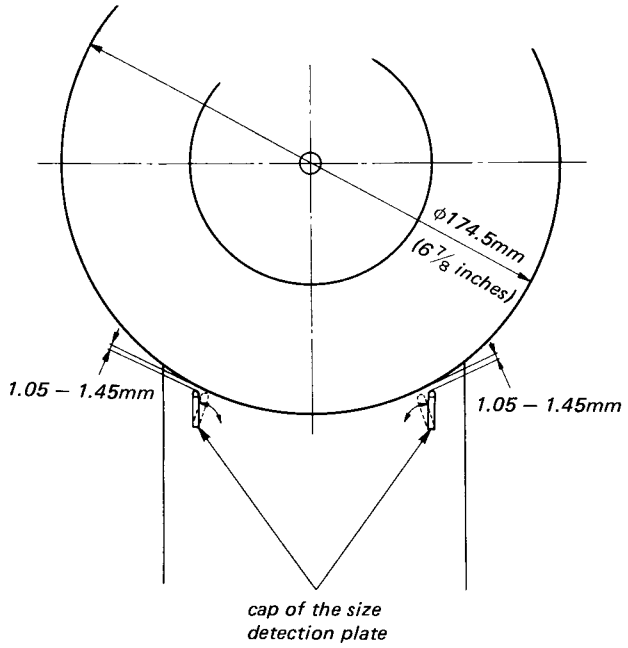


SECTION 3
ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENTS

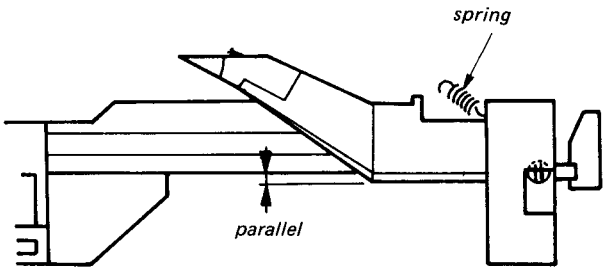
17cm Size Detection Plate Adjustment

1. SIZE switch: 17
2. Set a 17cm record (diameter: 174.5mm) and press the DISC HOLD button.
3. Adjust the caps by bending to the left and right so that the clearance between the caps and the record is 1.05 – 1.45mm.

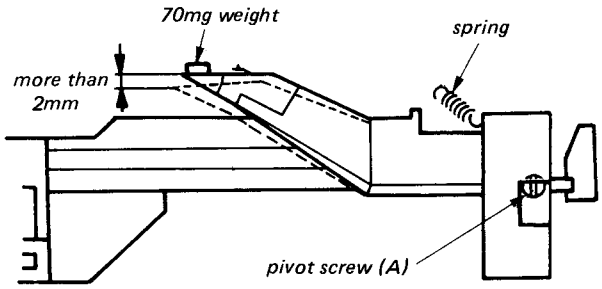


Vertical Balance and Sensitivity Adjustment

1. With the spring removed, confirm that the arm is balanced, as shown in the figure.

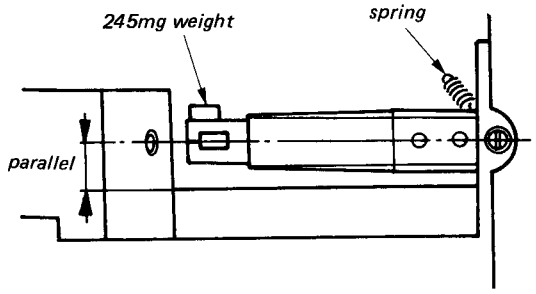


2. Adjust the pivot screw (A) so that the stylus tip drops more than 2mm when a 70mg weight (use washer, etc.) is placed on the stylus tip.
3. After adjustment, secure the pivot screw (A) with screw lock.
4. Mount the spring.

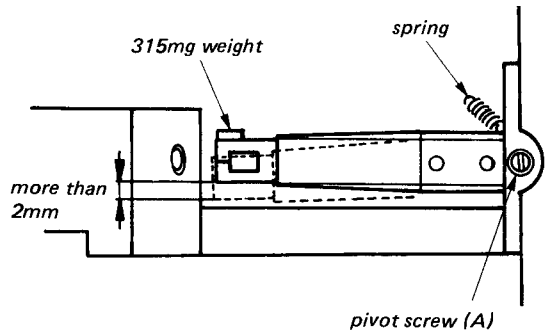


Horizontal Balance and Sensitivity Adjustment

1. With the spring removed, confirm that the arm is balanced when a 245mg weight is placed on the stylus tip, as shown in the figure.

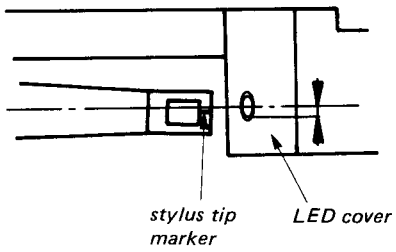


2. Adjust the pivot screw (A) so that the stylus tip drops more than 2mm when a 315mg weight is placed on the stylus tip.
3. After adjustment, secure the pivot screw (A) with screw lock.
4. Mount the spring.

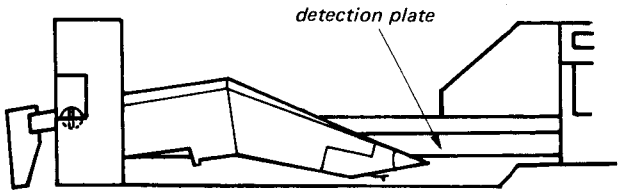


Arm Operation Point Check

1. SPEED switch: 33
   SIZE switch: 30
2. Set a 30cm record, and press the DISC HOLD button.
3. Press the START/STOP button, and confirm that the arm motor goes ON/OFF when the stylus is led in, with the stylus tip marker in the range shown in the figure.

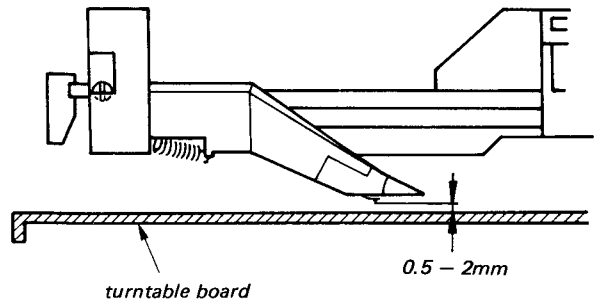


4. If it is not in the range shown, bend the detection plate to adjust.

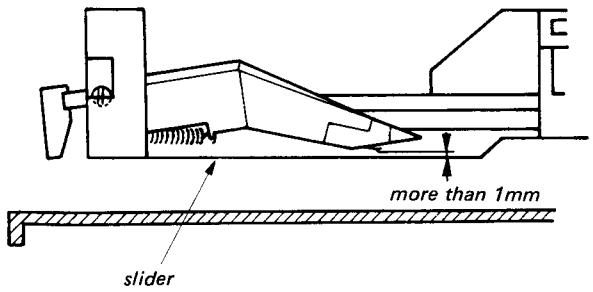


Stylus Tip Height Check

1. Press the DISC HOLD button.
2. Press the arm down/up button and lower the arm.
3. At this time, confirm that the clearance between the stylus tip and turntable board surface is 0.5 – 2mm.



4. Press arm down/up button and raise the arm.
5. At this time, confirm that the clearance between the stylus tip and bottom of the slider is more than 1mm.



Drop Point Check

1. SPEED switch: 45
   SIZE switch: 17
2. Set a 17cm test record (4RS-1170) and press the DISC HOLD button.
3. Press the START/STOP button and confirm that the drop point is 10 – 19 counts.
4. Press the START/STOP button and return the arm.
5. SPEED switch: 33
   SIZE switch: 30
6. Press the DISC HOLD button and change to a 30cm test record (YFSC-16).
7. Press the START/STOP button and confirm that the drop point is 8 – 19 counts.
8. Perform this check with the set both standing up and lying down.

Return Position Check

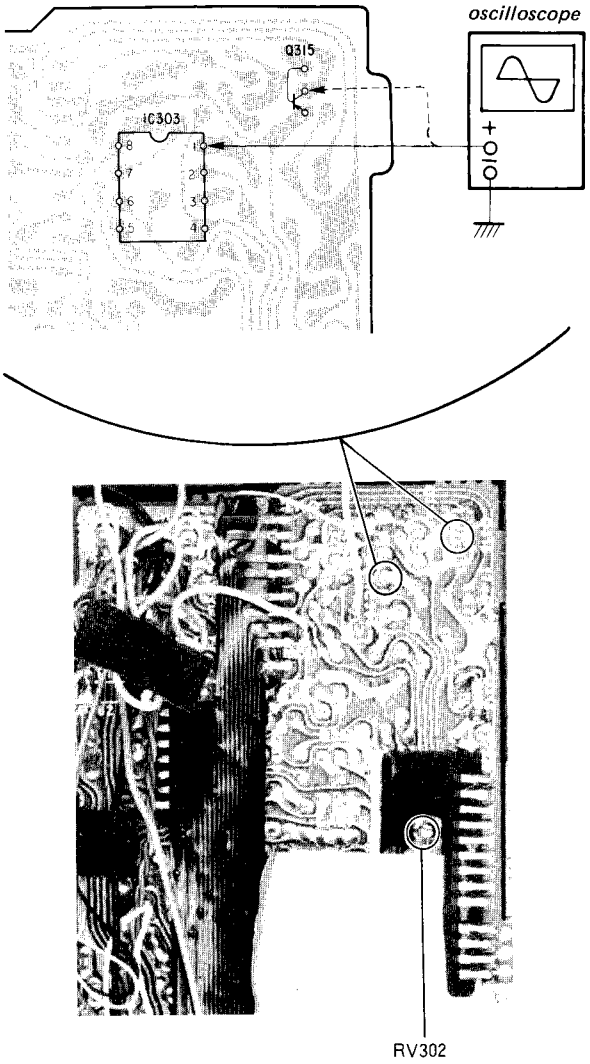
1. SPEED switch: 45
   SIZE switch: 17
2. Set a 17cm test record (4RS-1170) and press the DISC HOLD button.
3. Press MANUAL (△) button and place the arm near the innermost circumference.
4. Press the arm down/up button to lower the arm, and check that the return position is 23 – 28 counts.
5. Press the START/STOP button and return the arm.
6. SPEED switch: 33
   SIZE switch: 30
7. Press the DISC HOLD button and change to a 30cm test record (YFSC-16).
8. Press MANUAL (△) button and place the arm near the innermost circumference.
9. Press the arm down/up button to lower the arm, and check that the return position is 9 – 12 counts.
10. Perform this check with the set both standing up and lying down.

3-2. ELECTRICAL ADJUSTMENTS

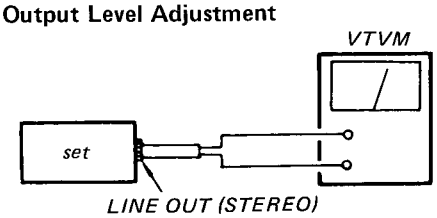
Arm Count Offset Adjustment

1. SPEED switch: 33
   SIZE switch: 30
   DISC HOLD button: ON
2. Press the MANUAL (△) button for about 0.5 seconds and put the arm into waiting state.
3. Adjust RV302 so that IC303 pin ① output voltage is 0.17 – 0.23V at this time.
4. Next, press the MANUAL (△) button continuously and check that Q315 collector voltage changes from 0V to 3.2 – 3.8V at 17cm record drop point position.

Adjustment Location: main board



Play Output Level Adjustment



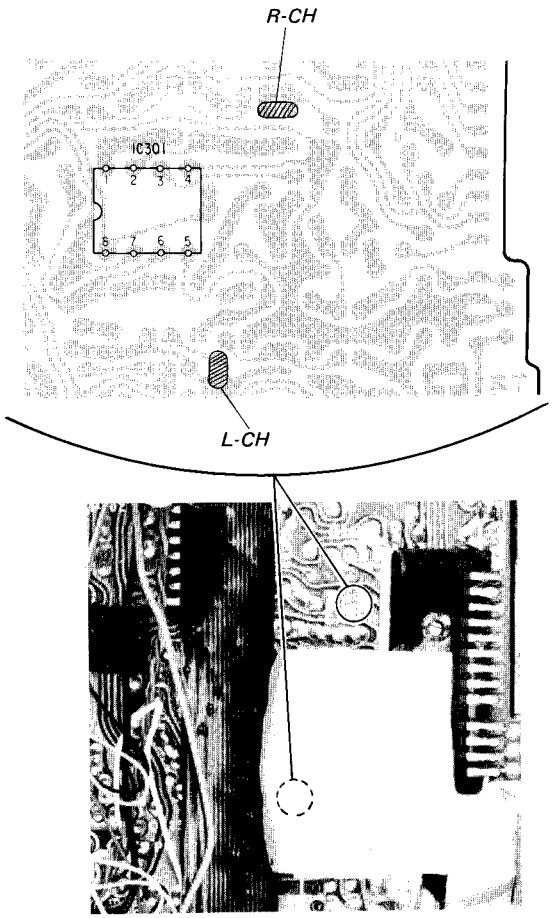
1. SPEED switch: 33
   SIZE switch: 30
2. Set a test record (YFSC-16) and press the DISC HOLD button.
3. Play the 1kHz portion of the test record and check that L-CH and R-CH LINE OUT levels are the adjustment values.
4. If not, adjust by changing the solder bridge.

pattern	LINE OUT level
open	down
short	up

Adjustment Value:

LINE OUT level: 0.20 – 0.32V
(–11.8 to –7.8dB)
Level difference between channels:
less than 2dB

Adjustment Location: main board

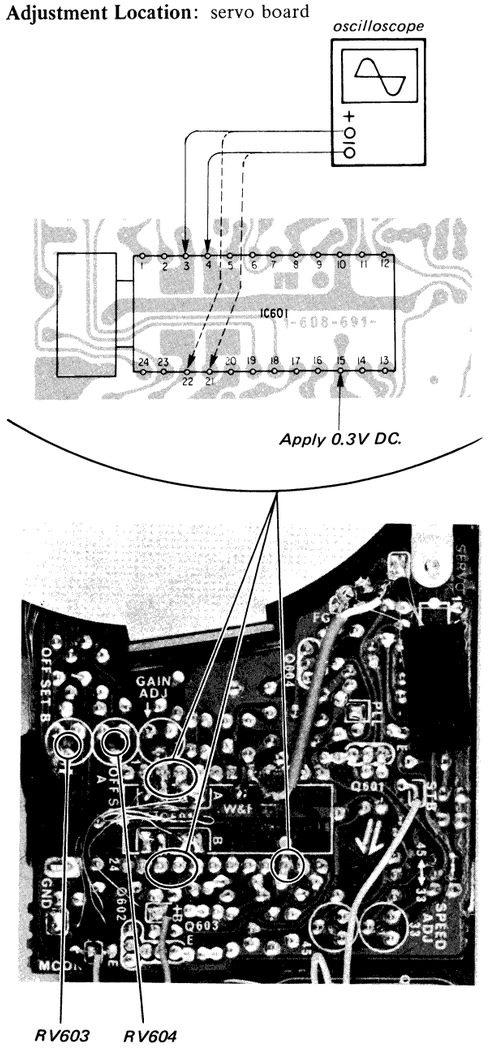


Servo Offset Adjustment

1. With POWER switch off, remove the motor block from the set and take off the turntable (see page 10).
2. POWER switch: ON
   DISC HOLD button: ON
3. Apply 0.3V DC to IC601 pin (15) (play mode).
4. Adjust RV604 so that the voltage between IC601 pins (3) and (4) is 0 ±3mV.
5. In the same way, adjust RV603 so that the voltage between IC601 pins (21) and (22) is 0 ±3mV.

Note: When the turntable is mounted, turn POWER siwtch off.

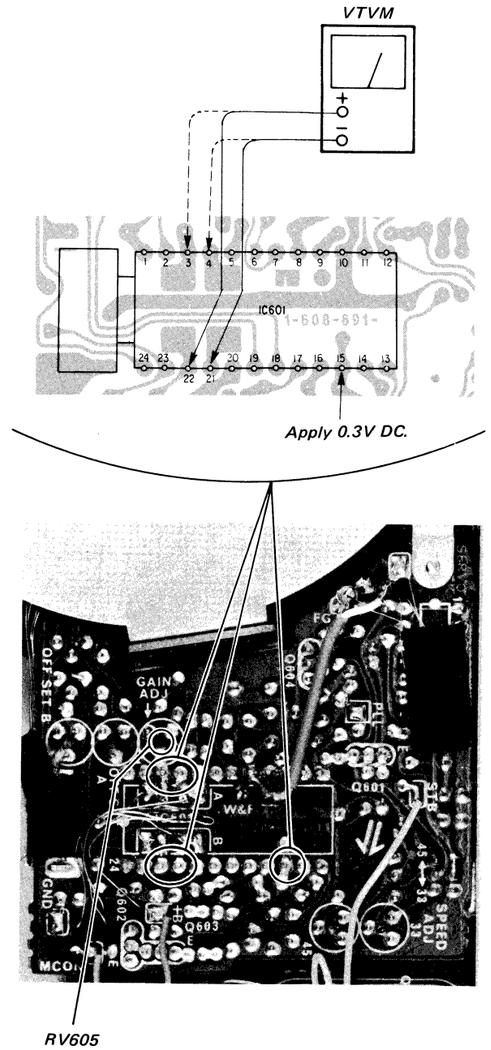
Adjustment Location: servo board



Servo Output Level Adjustment

1. SPEED switch: 33
   SIZE switch: 30
2. Apply 0.3V DC to IC601 pin (15) and rotate the motor.
3. Measure the output level between IC601 pins (21) and (22).
4. Next, measure the output level between IC601 pins (3) and (4), and adjust RV605 so that the difference between the two output levels is −1.5 to 1.5dB.

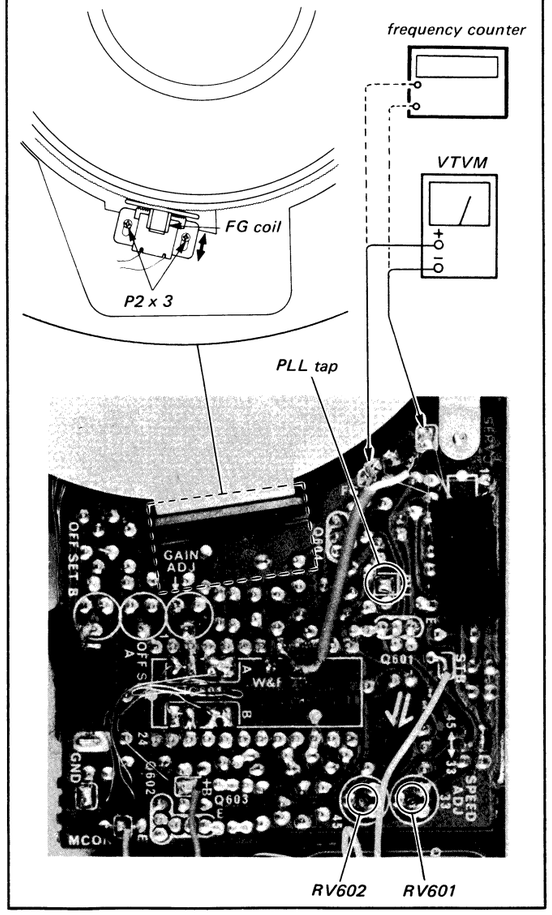
Adjustment Location: servo board



Servo Speed Adjustment

1. SPEED switch: 33
2. Rotate the turntable with PLL tap off (pattern: open).
3. Loosen the two P2 x 3 screws, and move the FG coil back and forth so that FG output level is −50 to −40dB (max −40dB). After adjusting, tighten screws P2 x 3.
4. Adjust RV601 so that FG output frequency is 323 – 329Hz.
5. SPEED switch: 45
6. Adjust RV602 so that FG output frequency is 439 – 445Hz.
7. Next, rotate the turntable with PLL tap on (pattern: short).
8. Check that FG output frequency is 338Hz for 33 and 456Hz for 45.

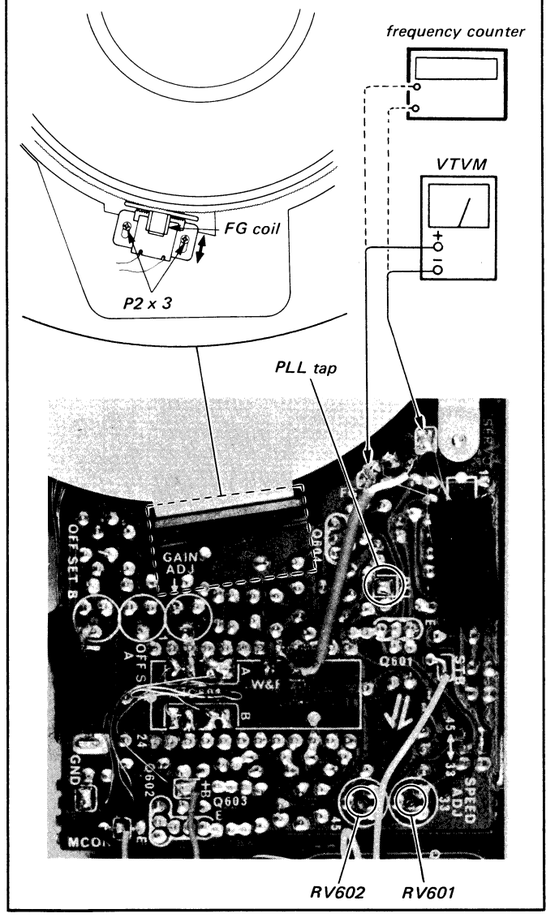
Adjustment Location: servo board



Servo Speed Adjustment

1. SPEED switch: 33
2. Rotate the turntable with PLL tap off (pattern: open).
3. Loosen the two P2 x 3 screws, and move the FG coil back and forth so that FG output level is −50 to −40dB (max −40dB). After adjusting, tighten screws P2 x 3.
4. Adjust RV601 so that FG output frequency is 323 – 329Hz.
5. SPEED switch: 45
6. Adjust RV602 so that FG output frequency is 439 – 445Hz.
7. Next, rotate the turntable with PLL tap on (pattern: short).
8. Check that FG output frequency is 338Hz for 33 and 456Hz for 45.

Adjustment Location: servo board

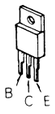


MEMO

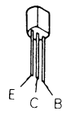
4-1. MOUNTING DIAGRAM — *Conductor Side* —

Semiconductor Lead Layouts

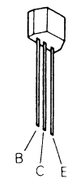
2SB834



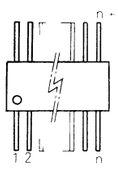
2SB1013
2SC2001



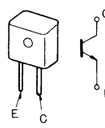
2SA1048-GR
2SC2458



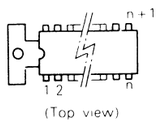
MSM5842-18SG



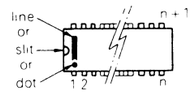
PH104



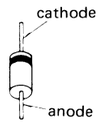
CX20048



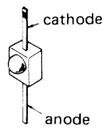
MSM5810RS
NJM2904D
NJM4558D-D
TA7688P



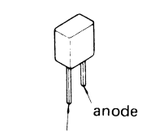
1S1555



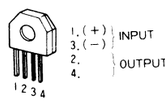
BR2222S



SR110

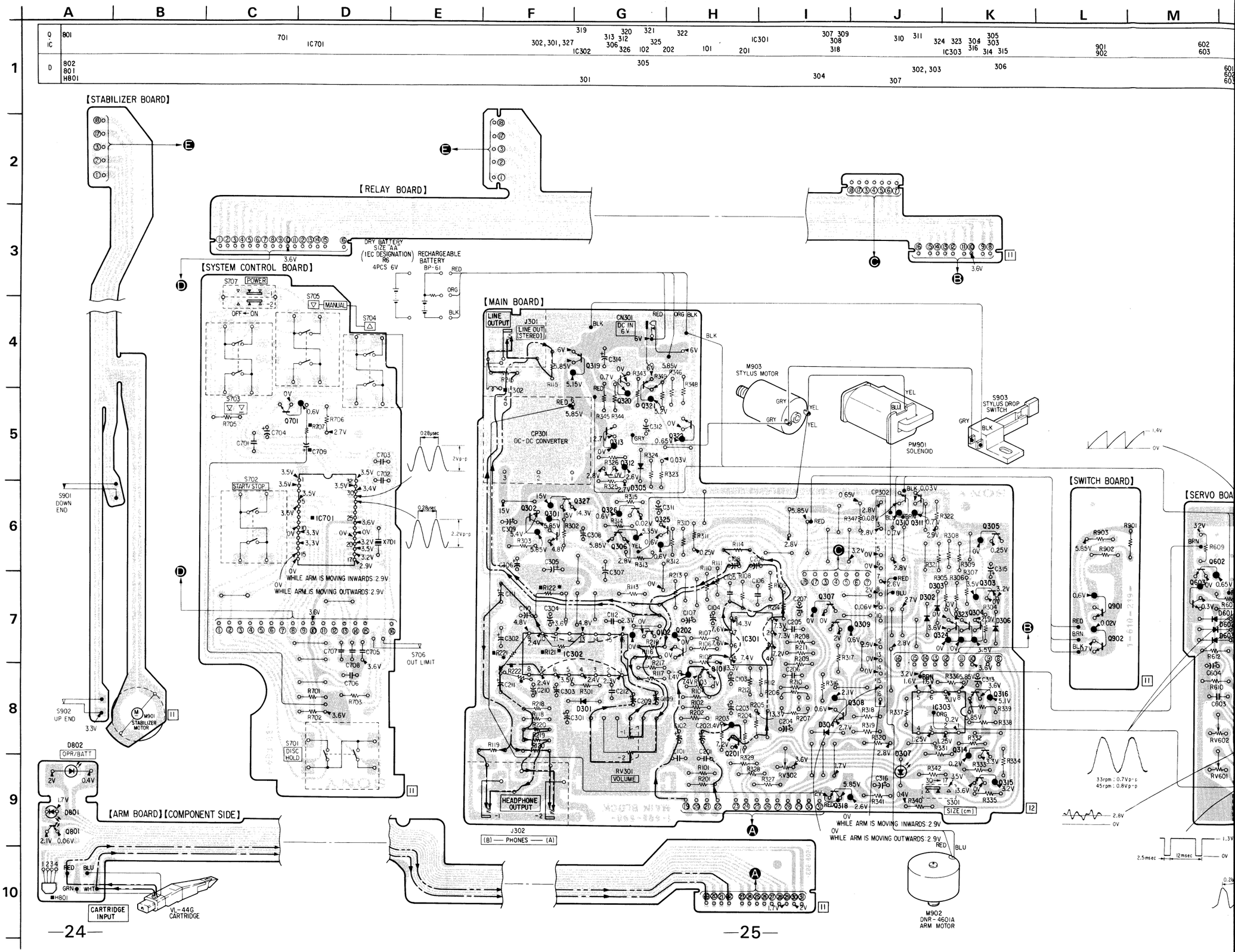


THS103A



Note:

- ○— : parts extracted from the component side.
- ●— : parts extracted from the conductor side.
- ■ : part mounted on the conductor side.
- ▒ : B + pattern
- ▬▶▬ : signal path
- ▬▬▶ : L-CH signal path
- ▬·▬▶ : R-CH signal path



— Conductor Side —

D E F G H I J K L M N O P Q R S T

Q IC

D

1 2 3 4 5 6 7 8 9 10

【RELAY BOARD】

【MAIN BOARD】

【SWITCH BOARD】

【SERVO BOARD】

DRY BATTERY SIZE 'AA' (IEC DESIGNATION) R6 4PCS 6V

RECHARGEABLE BATTERY BP-61

S704

S706 OUT LIMIT

X701

LINE OUTPUT J301 LINE OUT (STEREO)

CN301 DC IN 6V

CP301 DC-DC CONVERTER

IC301

IC302

IC303

IC601

IC602

RV301 VOLUME

RV302

RV601

RV602

RV603

RV604

RV605

HEADPHONE OUTPUT

J302 (B) — PHONES — (A)

M903 STYLUS MOTOR

PM901 SOLENOID

S903 STYLUS DROP SWITCH

S301 SIZE (cm)

S601 SPEED

M902 DNR-460IA ARM MOTOR

FG901 SPEED DETECTION

H601

H602

L902-2

L901-2

L901-1

L902-1

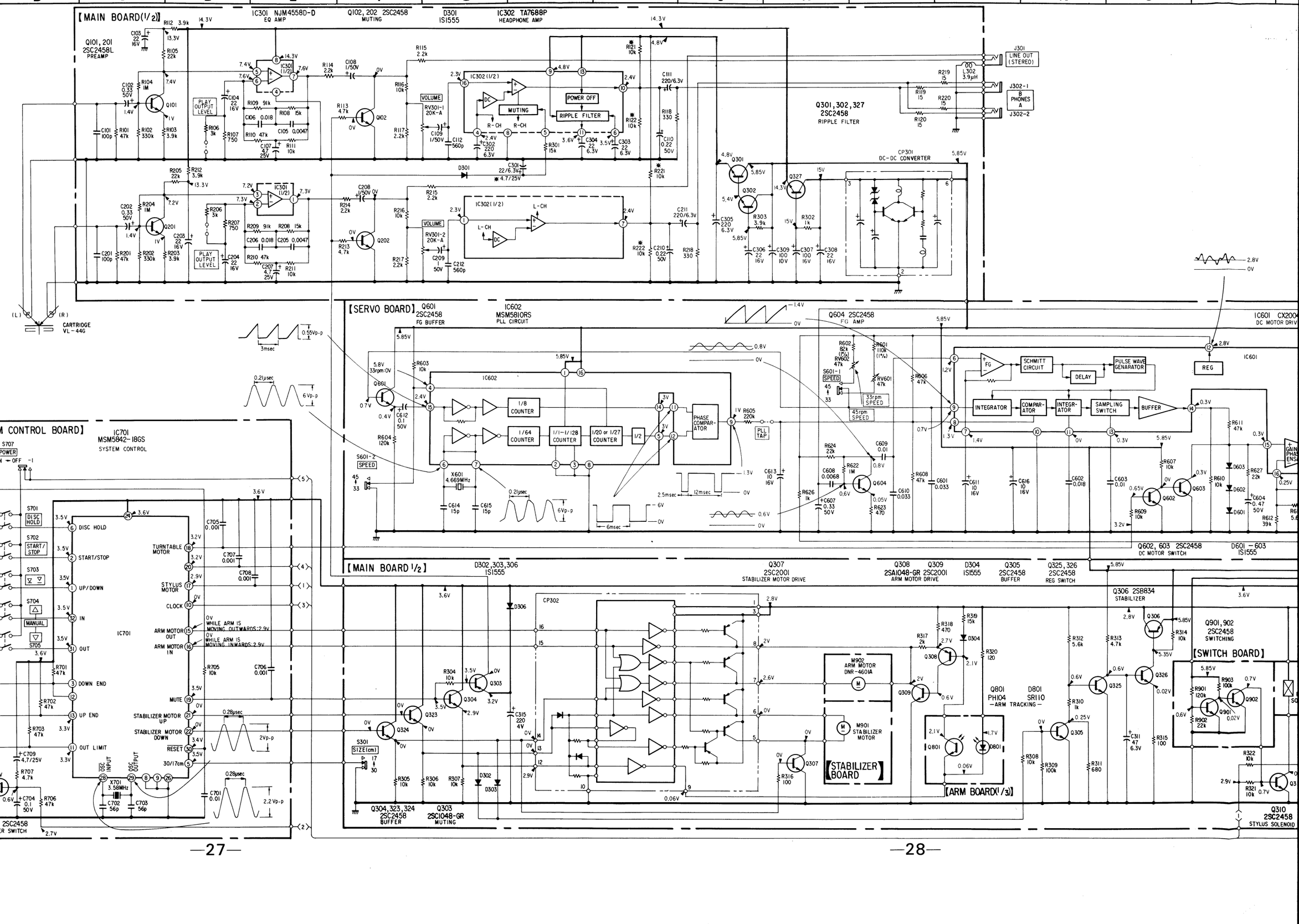
WHILE ARM IS MOVING INWARDS: 2.9V

WHILE ARM IS MOVING OUTWARDS: 2.9V

33rpm: 0.7Vp-p 45rpm: 0.8Vp-p

33rpm: 0V

4-2. SCHEMATIC DIAGRAM



K L M N O P Q R S T U V W X Y Z

1 2 3 4 5 6 7 8 9 10

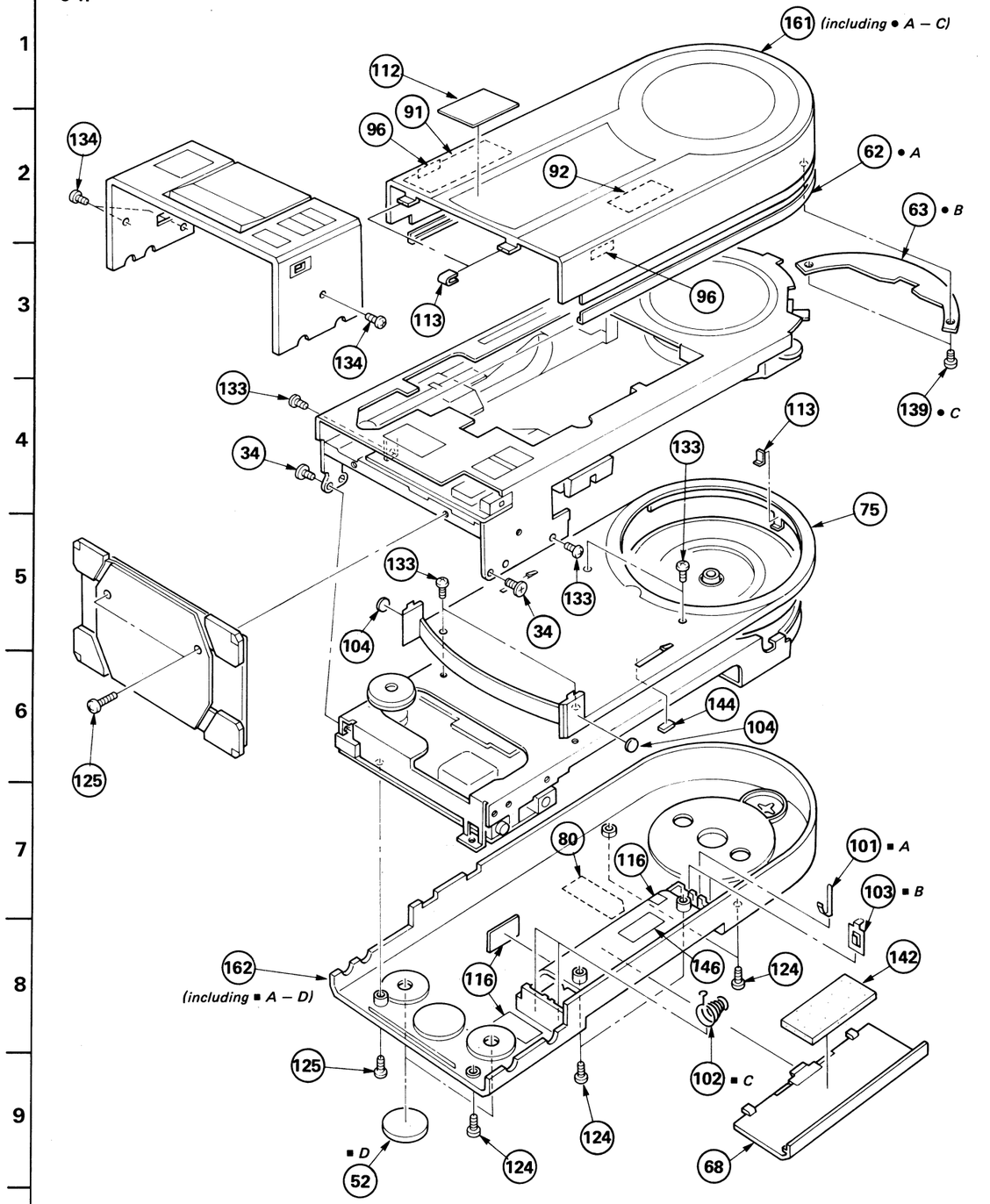
Note:

- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, ⅛W unless otherwise noted. kΩ : 1000Ω, MΩ : 1000kΩ
- ※ : serial No. 13,801 and later.
- ▭ : adjustment for repair.
- ——: B+ bus.
- The voltages are dc with respect to ground with a 17cm record played at the speed of 45rpm.
- Readings are taken under no-signal conditions.
- Voltage variations may be noted due to normal production tolerances.
- Waveforms are measured to ground with oscilloscope.

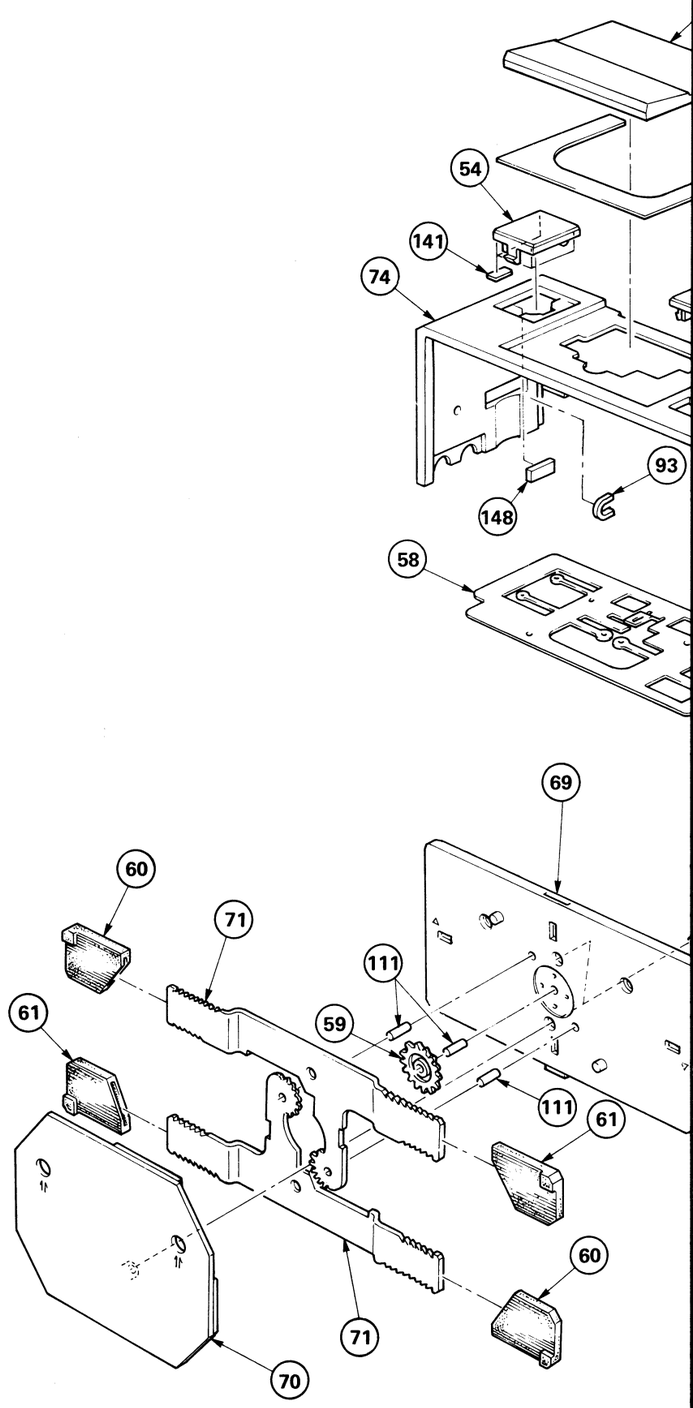
Note: Voltages are measured with a VOM (50kΩ/V).

SECTION 5
EXPLODED VIEWS AND PARTS LIST

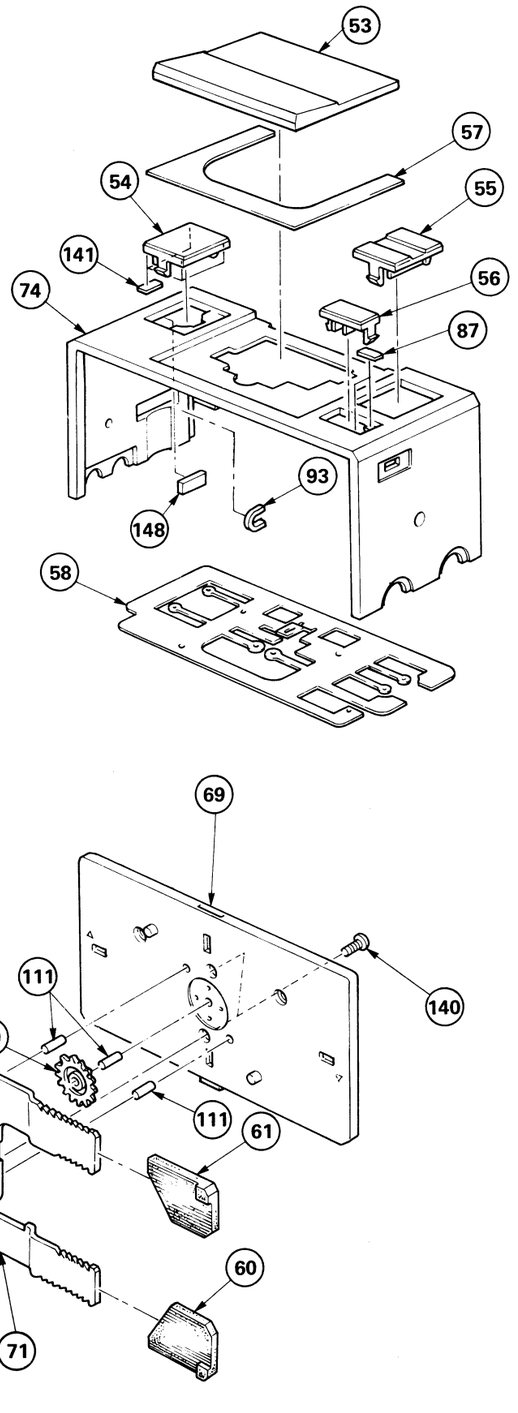
5-1.



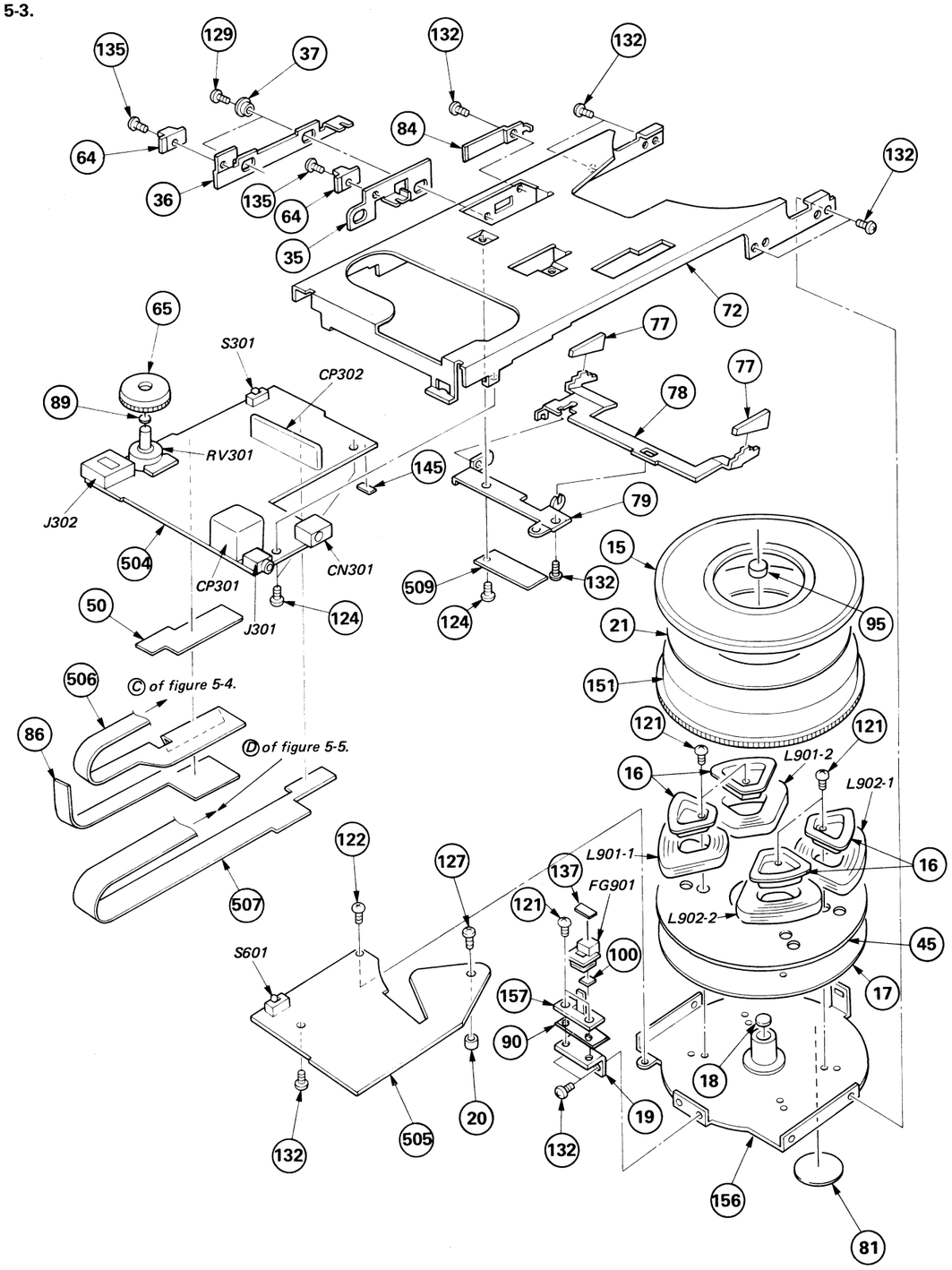
5-2.



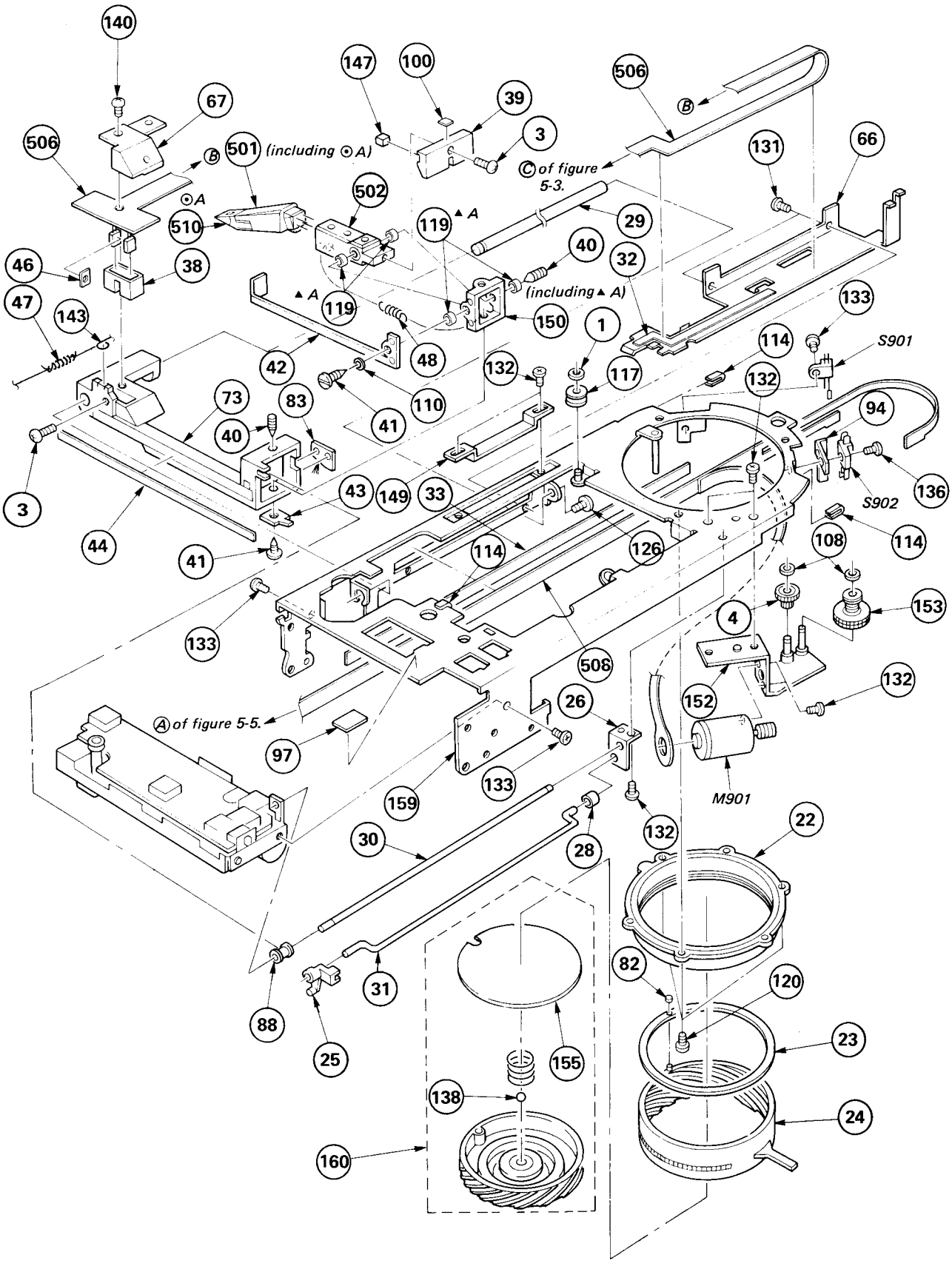
5-2.


53
57
54
55
141
56
74
87
93
148
58
69
60
71
111
59
140
61
111
61
60
71
70

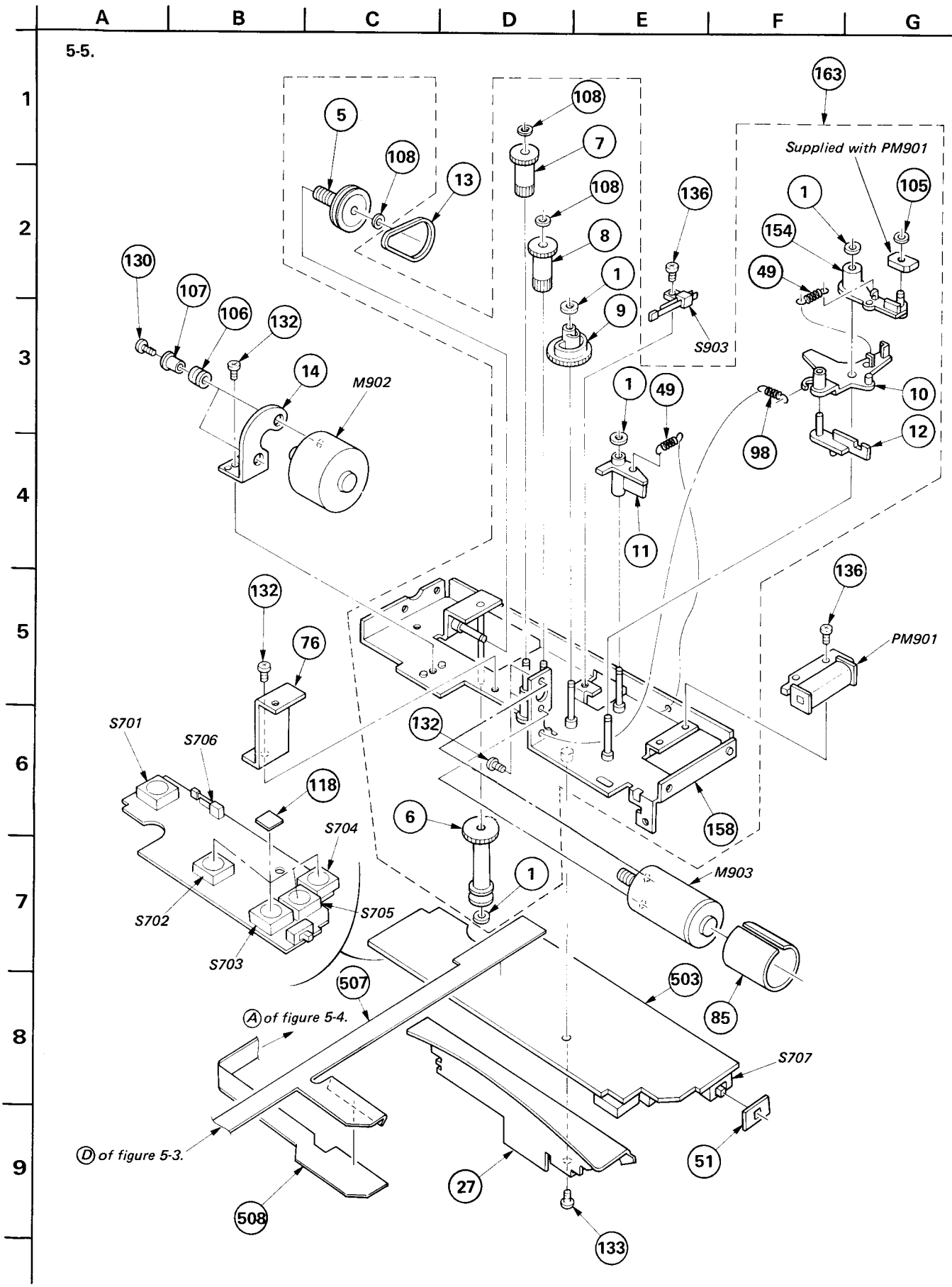
5-3.


135
129
37
132
132
64
84
36
135
64
132
35
72
65
77
S301
CP302
89
77
78
RV301
145
J302
79
504
CN301
509
15
CP301
132
50
J301
124
124
95
21
506
Ⓒ of figure 5-4.
151
121
121
86
Ⓓ of figure 5-5.
L901-2
16
L902-1
L901-1
122
127
137
16
FG901
121
507
L902-2
45
S601
100
157
17
90
18
19
132
20
505
132
156
81

5-4.


A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
9
(including ⊙A)
(including ▲A)
Ⓒ of figure 5-3.
Ⓐ of figure 5-5.
S901
S902
M901

5-5.


A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
9
163
Supplied with PM901
5
108
108
13
108
7
8
1
9
136
S903
1
105
154
49
130
107
106
132
14
M902
1
49
10
12
98
11
132
76
136
PM901
S701
S706
132
118
S704
6
1
M903
S702
S705
S703
158
507
503
85
A of figure 5-4.
S707
D of figure 5-3.
27
51
508
133

GENERAL SECTION

No.	Part No.	Description
1	3-307-948-01	WASHER, NYLON
2	.....	
3	3-309-597-91	SCREW, TAPPING (1.4)
4	3-312-129-00	WHEEL, WORM
5	3-312-131-00	PULLEY, WORM
6	3-312-132-00	GEAR, DRUM
7	3-312-133-00	GEAR (A)
8	3-312-134-00	GEAR (B)
9	3-312-135-00	GEAR, CAM
10	3-312-136-00	LEVER, RELEASE, ARM
11	3-312-137-00	LEVER (S), ARM LOCK
12	3-312-138-00	LEVER (B), JOINT
13	3-312-139-00	BELT
14 ♣	3-312-140-00	BRACKET (A), MOTOR
15	3-312-141-02	SHEET, TURNTABLE
16	3-312-142-00	RETAINER, COIL
17 ♣	3-312-143-00	PLATE, YOKE
18	3-312-144-00	RETAINER, THRUST
19 ♣	3-312-145-00	BRACKET, FG
20	3-312-146-00	SPACER
21	3-312-147-00	SHEET, ADHESIVE, TURNTABLE SHEET
22 ♣	3-312-148-00	GUIDE, SCREW
23	3-312-149-00	PANEL, ROLLING
24	3-312-150-00	SCREW (W)
25	3-312-151-00	LEVER (A), JOINT
26 ♣	3-312-153-00	PLATE, FULCRUM
27 ♣	3-312-154-00	PLATE, BLIND
28	3-312-155-00	COLLAR
29 ♣	3-312-156-00	SHAFT (M)
30 ♣	3-312-157-00	SHAFT, GUIDE, SLIDER
31 ♣	3-312-158-00	SHAFT, RELEASE, ARM
32 ♣	3-312-159-00	SHEET, ADHESIVE, FLEXIBLE
33 ♣	3-312-160-00	SHEET (B), ADHESIVE, FLEXIBLE
34	3-312-161-00	SCREW, STEP, PRECISION
35 ♣	3-312-162-00	LEVER, SELECTION, SIZE
36 ♣	3-312-163-00	LEVER, SELECTION, SPEED
37	3-312-164-00	SHAFT, SELECTION LEVER, SIZE
38	3-312-165-00	CASE, PHOTO
39	3-312-166-00	BALANCER
40	3-312-168-00	SCREW (A), PIVOT
41	3-312-169-00	SCREW (B), PIVOT
42	3-312-170-00	PLATE, DETECTION
43	3-312-171-00	GUIDE, CENTER RING
44	3-312-172-00	PLATE, SLIDER
45	3-312-271-00	SHEET, INSULATING, COIL

GENERAL SECTION

No.	Part No.	Description
46	3-312-175-00	PLATE, BLIND
47	3-312-176-00	SPRING, TENSION
48	3-312-177-00	SPRING, TENSION
49	3-312-179-00	SPRING, TENSION
50 ♣	3-312-181-00	SHEET, PROTECTION
51 ♣	3-312-182-00	PLATE, BLIND, SWITCH
52	3-312-185-01	FOOT, ROUND RUBBER
53	3-312-190-00	BUTTON, START
54	3-312-191-00	BUTTON, HOLD
55	3-312-192-00	BUTTON, FAST FORWARD
56	3-312-193-00	BUTTON, UP DOWN
57	3-312-194-00	ORNAMENT, BUTTON
58	3-312-195-00	SPRING
59	3-312-196-00	GEAR, STAND
60	3-312-197-00	FOOT (A), RUBBER
61	3-312-198-00	FOOT (B), RUBBER
62	3-312-201-00	RUBBER, GUARD
63 ♣	3-312-205-00	COVER, STABILIZER
64	3-312-206-00	KNOB, SELECTION
65	3-312-207-00	KNOB, CONTROL
66 ♣	3-312-211-00	GUIDE, FLEXIBLE
67	3-312-212-00	COVER, LED
68	3-312-213-00	LID, BATTERY CASE
69 ♣	3-312-214-00	PLATE, BOTTOM
70	3-312-215-00	RETAINER, STAND
71	3-312-216-00	STAND
72 ♣	3-312-219-00	CHASSIS
73	3-312-220-00	SLIDER
74	3-312-222-00	PANEL, CONTROL
75 ♣	3-312-223-11	BOARD, TURNTABLE
76	3-312-225-00	REINFORCEMENT, SHAFT (A)
77	3-312-229-00	CAP
78 ♣	3-312-230-00	PLATE, DETECTION, SIZE
79	X-3312-119-0	BRACKET ASSY, DETECTION, SIZE
80	3-312-238-00	LABEL, MODEL NUMBER
81 ♣	3-312-239-00	SHEET (A)
82	3-312-241-00	MARKER
83	3-312-243-00	CLEANER
84	3-312-245-00	SPRING
85 ♣	3-312-246-00	PLATE, SHIELD, MOTOR
86 ♣	3-312-248-00	PLATE (B), SHIELD
87	9-911-838-XX	CUSHION (2X2), RUBBER
88	3-312-263-00	SLEEVE, DAMPER
89	4-885-139-00	PAD, BRAKE
90 ♣	3-312-261-00	SPACER, FG

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked " ♣ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.
- If there are two or more same circuitsin a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms.
- F : nonflammable

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC,
UPD···: μPD···

GENERAL SECTION

No.	Part No.	Description
91	3-312-267-00	LABEL (FRENCH), CAUTION
92	3-312-270-00	LABEL (ENGLISH), CAUTION
93	♦;3-312-255-00	PLATE, SIDE, CONTROL COVER
94	3-312-256-00	SPRING
95	9-911-815-02	CUSHION, SPINDLE
96	3-485-330-31	FELT, ABSORBER, VIBRATION
97	3-485-343-01	CUSHION, CABINET UPPER 10X7X0.5
98	3-534-558-00	SPRING, TENSION
99	.....	
100	3-561-685-00	SHEET (C), INSULATING
101	3-562-215-00	BOARD, TERMINAL, RECHARGEABLE
102	3-562-216-00	SPRING
103	3-562-223-00	TERMINAL BOARD, POSITIVE
104	3-566-226-11	LABEL, PUSH
105	3-570-615-00	POLY-WASHER (DIA.1.2)
106	3-570-770-00	CUSHION (A), MOTOR
107	3-570-772-00	SPACER (M)
108	3-578-224-00	WASHER
109	.....	
110	3-701-438-11	WASHER, 2.5
111	3-703-358-00	PIN, PARALLEL (DIA. 2X6)
112	3-703-707-01	STICKER, SONY SYMBOL (21)
113	3-831-441-XX	CUSHION
114	3-831-441-XX	CUSHION, CABINET UPPER 10X7X0.3
115	.....	
116	3-831-441-XX	CUSHION
117	3-834-636-00	PULLEY
118	3-572-862-11	SPACER
119	4-863-604-00	BEARING, PIVOT
120	7-627-553-37	SCREW, PRECISION +P 2X3
121	7-621-255-12	SCREW +P 2X3
122	7-621-255-22	SCREW +P 2X4
123	.....	
124	7-621-772-38	SCREW +B 2X6
125	7-621-772-48	SCREW +B 2X8
126	7-621-775-10	SCREW +B 2.6X4
127	7-621-555-32	SCREW +K 2X5
128	.....	
129	7-627-452-18	SCREW, PRECISION +K 2X3
130	7-627-552-67	SCREW, PRECISION +P 1.7X4.5
131	7-627-553-18	SCREW, PRECISION +P 2X2
132	7-627-553-28	SCREW, PRECISION +P 2X2.5
133	7-627-553-48	SCREW, PRECISION +P 2X4
134	7-627-554-27	SCREW, PRECITION +P 2X6
135	7-627-850-77	SCREW, PRECISION +P 1.4X1.8

GENERAL SECTION

No.	Part No.	Description
136	7-627-850-58	SCREW, PRECISION +P 1.4X3.5
137	9-911-850-XX	CUSHION
138	7-671-114-01	BALL 4, STEEL
139	7-685-102-29	SCREW +P 2X4 TYPE2 SLIT
140	7-685-104-29	SCREW +P 2X6 TYPE2 SLIT
141	9-911-844-XX	INTERCEPTOR, LIGHT
142	9-911-815-01	CUSHION
143	9-911-825-42	STRING, DIAL
144	9-911-838-XX	CUSHION, METER
145	9-911-838-XX	CUSHION
146	9-911-838-XX	PACKING, KNOB
147	9-911-840-XX	CUSHION (A)
148	9-911-844-XX	RUBBER, BRAKE
149	♦;A-3036-833-A	PLATE ASSY, DETECTION, POSITION
150	X-3312-117-1	HOLDER ASSY, BEARING
151	X-3312-118-1	TURNTABLU ASSY
152	X-3312-101-0	BRACKET ASSY, MOTOR
153	X-3312-102-0	GEAR ASSY, STABILIZER
154	X-3312-103-0	LEVER (P) ASSY, ARM LOCK
155	X-3312-104-0	PLATE ASSY, UPPER, STABILIZER
156	X-3312-105-0	CHASSIS ASSY, MOTOR
157	X-3312-106-0	HEAD ASSY, FG
158	X-3312-110-0	CHASSIS ASSY, SUB
159	♦;X-3312-111-0	CHASSIS ASSY, ARM
160	X-3312-112-0	SCREW (M) ASSY
161	X-3312-114-0	CABINET (UPPER) ASSY
162	X-3312-115-1	CABINET (LOWER) ASSY
163	♦;X-3312-116-0	DRIVING BLOCK COMP ASSY, ARM

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MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms.
- F : nonflammable

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC,
UPD···: μPD···

ACCESSORY & PACKING MATERIAL

Part No.	Description
1-555-658-00	CORD, CONNECTION (RK-129)
3-312-228-00	BAND, DISK
3-312-232-00	CUSHION
3-312-247-00	BRUSH
3-312-257-00	ADAPTOR
3-312-268-00	INDIVIDUAL CARTON
3-312-269-00	(E)...BAG, POLYETHYLENE
3-312-272-00	CUSHION, CORNER
3-312-274-00	INDIVIDUAL SUB CARTON
3-546-434-00	BAG, POLYETHYLENE
3-701-616-00	BAG, POLYETHYLENE
3-701-618-00	BAG, POLYETHYLENE
3-701-631-00	BAG, POLYETHYLENE
3-773-316-11	MANUAL, INSTRUCTION
8-951-151-91	(E)...MDR-W3 (B) SET

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
501	1-549-115-00	CARTRIDGE			
502	1-562-240-00	CONNECTOR			
503	♦;1-608-689-00	PC BOARD, SYSTEM CONTROL			
503	♦;A-3079-124-A	MOUNTED PCB, SYSTEM CONTROL			
504	♦;1-608-690-00	PC BOARD, MAIN			
504	♦;A-3070-099-A	MOUNTED PCB, MAIN			
505	♦;1-608-691-00	PC BOARD, SERVO			
505	♦;A-3065-033-A	MOUNTED PCB, SERVO			
506	1-608-693-00	PC BOARD, ARM			
507	1-609-347-00	PC BOARD, RELAY			
508	1-609-348-00	PC BOARD, STABILIZER			
509	♦;1-610-219-00	PC BOARD, SWITCH			
510	1-549-119-00	STYLUS, ND-144G			
C101	1-102-106-00	CERAMIC	100PF	10%	50V
C102	1-123-609-00	ELECT	0.33MF	20%	50V
C103	1-123-622-00	ELECT	22MF	20%	16V
C104	1-123-622-00	ELECT	22MF	20%	16V
C105	1-130-479-00	MYLAR	0.0047MF	5%	50V
C106	1-130-486-00	MYLAR	0.018MF	5%	50V
C107	1-123-616-00	ELECT	4.7MF	20%	25V
C108	1-123-611-00	ELECT	1MF	20%	50V
C109	1-123-611-00	ELECT	1MF	20%	50V
C110	1-123-608-00	ELECT	0.22MF	20%	50V
C111	1-123-296-00	ELECT	220MF	20%	6.3V
C112	1-102-115-00	CERAMIC	560PF	10%	50V
C201	1-102-106-00	CERAMIC	100PF	10%	50V
C202	1-123-609-00	ELECT	0.33MF	20%	50V
C203	1-123-622-00	ELECT	22MF	20%	16V
C204	1-123-622-00	ELECT	22MF	20%	16V
C205	1-130-479-00	MYLAR	0.0047MF	5%	50V
C206	1-130-486-00	MYLAR	0.018MF	5%	50V
C207	1-123-616-00	ELECT	4.7MF	20%	25V
C208	1-123-611-00	ELECT	1MF	20%	50V
C209	1-123-611-00	ELECT	1MF	20%	50V
C210	1-123-608-00	ELECT	0.22MF	20%	50V
C211	1-123-296-00	ELECT	220MF	20%	6.3V
C212	1-102-115-00	CERAMIC	560PF	10%	50V
C301	1-123-618-00 (UP TO SERIAL NO. 13,800)	ELECT	22MF	20%	6.3V
C301	1-123-616-00 (SERIAL NO. 13,801 AND LATER)	ELECT	4.7MF	20%	25V
C302	1-123-296-00	ELECT	220MF	20%	6.3V
C303	1-123-618-00	ELECT	22MF	20%	6.3V
C304	1-123-618-00	ELECT	22MF	20%	6.3V
C305	1-123-296-00	ELECT	220MF	20%	6.3V
C306	1-123-622-00	ELECT	22MF	20%	16V

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- MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC,
UPD···: μPD···

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C307	1-123-320-00	ELECT	100MF	20%	16V
C308	1-123-622-00	ELECT	22MF	20%	16V
C309	1-123-307-00	ELECT	100MF	20%	10V
C311	1-123-647-00	ELECT	47MF	20%	6.3V
C312	1-123-661-00	ELECT	100MF	20%	6.3V
C313	1-123-617-00	ELECT	10MF	20%	16V
C314	1-123-308-00	ELECT	220MF	20%	10V
C315	1-123-827-00	ELECT	220MF	20%	4V
C316	1-123-661-00	ELECT	100MF	20%	6.3V
C601	1-130-877-00	FILM	0.033MF	5%	50V
C602	1-130-519-00	MYLAR	0.018MF	10%	50V
C603	1-130-516-00	MYLAR	0.01MF	10%	50V
C604	1-123-610-00	ELECT	0.47MF	20%	50V
C605	1-123-611-00	ELECT	1MF	20%	50V
C606	1-123-617-00	ELECT	10MF	20%	16V
C607	1-123-609-00	ELECT	0.33MF	20%	50V
C608	1-130-514-00	MYLAR	0.0068MF	10%	50V
C609	1-130-516-00	MYLAR	0.01MF	10%	50V
C610	1-130-522-00	MYLAR	0.033MF	10%	50V
C611	1-123-617-00	ELECT	10MF	20%	16V
C612	1-123-607-00	ELECT	0.1MF	20%	50V
C613	1-123-617-00	ELECT	10MF	20%	16V
C614	1-102-951-00	CERAMIC	15PF	10%	50V
C615	1-102-951-00	CERAMIC	15PF	10%	50V
C616	1-123-617-00	ELECT	10MF	20%	16V
C701	1-130-516-00	MYLAR	0.01MF	10%	50V
C702	1-101-884-00	CERAMIC	56PF	10%	50V
C703	1-101-884-00	CERAMIC	56PF	10%	50V
C704	1-123-607-00	ELECT	0.1MF	20%	50V
C705	1-102-074-00	CERAMIC	0.001MF	10%	50V
C706	1-102-074-00	CERAMIC	0.001MF	10%	50V
C707	1-102-074-00	CERAMIC	0.001MF	10%	50V
C708	1-102-074-00	CERAMIC	0.001MF	10%	50V
C709	1-123-616-00	ELECT	4.7MF	20%	25V
CN301	1-507-749-00	JACK, EXTENTION POWER			
CP301	1-464-255-00	CONVERTER UNIT, DC-DC			
CP302	1-464-235-00	CIRCUIT UNIT, MOTOR DRIVING			
D301	8-719-815-55	DIODE 1S1555			
D302	8-719-815-55	DIODE 1S1555			
D303	8-719-815-55	DIODE 1S1555			
D304	8-719-815-55	DIODE 1S1555			
D305	8-719-815-55	DIODE 1S1555			
D306	8-719-815-55	DIODE 1S1555			

ELECTRICAL PARTS

Ref.No.	Part No.	Description
D307	8-719-922-24	DIODE BR2222S
D601	8-719-815-55	DIODE 1S1555
D602	8-719-815-55	DIODE 1S1555
D603	8-719-815-55	DIODE 1S1555
D801	8-719-101-11	DIODE SR110
D802	8-719-922-24	DIODE BR2222S
FG901	1-459-449-00	COIL
H601	8-719-800-18	DIODE THS103A
H602	8-719-800-18	DIODE THS103A
H801	8-719-800-18	DIODE THS103A
IC301	8-759-745-50	IC NJM4558D-D
IC302	8-759-201-23	IC TA7688P
IC303	8-759-700-42	IC NJM2904D
IC601	8-752-004-80	IC CX20048
IC602	8-759-903-00	IC MSM5810RS
IC701	8-759-907-19	IC MSM5842-18GS
J301	1-507-787-21	JACK
J302	1-507-727-00	JACK 2P
L302	1-408-558-00	MICRO INDUCTOR 3.9UH
L901	1-462-204-00	COIL, MOTOR (STATOR)
L902	1-462-204-00	COIL, MOTOR (STATOR)
M901	A-3133-175-A	MOTOR ASSY, STABILIZER
M902	8-835-087-01	MOTOR, DC (DNR-4601A)
M903	A-3133-175-A	MOTOR ASSY, STYLUS
PM901	1-454-350-00	SOLENOID, PLUNGER
Q101	8-729-245-83	TRANSISTOR 2SC2458
Q102	8-729-245-83	TRANSISTOR 2SC2458
Q201	8-729-245-83	TRANSISTOR 2SC2458
Q202	8-729-245-83	TRANSISTOR 2SC2458
Q301	8-729-245-83	TRANSISTOR 2SC2458
Q302	8-729-245-83	TRANSISTOR 2SC2458
Q303	8-729-204-83	TRANSISTOR 2SA1048-GR
Q304	8-729-245-83	TRANSISTOR 2SC2458
Q305	8-729-245-83	TRANSISTOR 2SC2458
Q306	8-729-283-42	TRANSISTOR 2SB834
Q307	8-729-100-13	TRANSISTOR 2SC2001
Q308	8-729-204-83	TRANSISTOR 2SA1048-GR
Q309	8-729-100-13	TRANSISTOR 2SC2001
Q310	8-729-245-83	TRANSISTOR 2SC2458
Q311	8-729-245-83	TRANSISTOR 2SC2458
Q312	8-729-204-83	TRANSISTOR 2SA1048-GR
Q313	8-729-100-13	TRANSISTOR 2SC2001
Q314	8-729-245-83	TRANSISTOR 2SC2458

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ELECTRICAL PARTS

Ref.No.	Part No.	Description
Q315	8-729-204-83	TRANSISTOR 2SA1048-GR
Q316	8-729-204-83	TRANSISTOR 2SA1048-GR
Q318	8-729-245-83	TRANSISTOR 2SC2458
Q319	8-729-801-83	TRANSISTOR 2SB1013
Q320	8-729-245-83	TRANSISTOR 2SC2458
Q321	8-729-204-83	TRANSISTOR 2SA1048-GR
Q322	8-729-245-83	TRANSISTOR 2SC2458
Q323	8-729-245-83	TRANSISTOR 2SC2458
Q324	8-729-245-83	TRANSISTOR 2SC2458
Q325	8-729-245-83	TRANSISTOR 2SC2458
Q326	8-729-245-83	TRANSISTOR 2SC2458
Q327	8-729-245-83	TRANSISTOR 2SC2458
Q601	8-729-245-83	TRANSISTOR 2SC2458
Q602	8-729-245-83	TRANSISTOR 2SC2458
Q603	8-729-245-83	TRANSISTOR 2SC2458
Q604	8-729-245-83	TRANSISTOR 2SC2458
Q701	8-729-245-83	TRANSISTOR 2SC2458
Q801	8-729-102-10	TRANSISTOR PH104
Q901	8-729-245-83	TRANSISTOR 2SC2458
Q902	8-729-245-83	TRANSISTOR 2SC2458
R101	1-247-871-00	CARBON 47K 5% 1/6W
R102	1-247-891-00	CARBON 330K 5% 1/6W
R103	1-247-845-00	CARBON 3.9K 5% 1/6W
R104	1-247-903-00	CARBON 1M 5% 1/6W
R105	1-247-863-00	CARBON 22K 5% 1/6W
R106	1-247-842-00	CARBON 3K 5% 1/6W
R107	1-247-828-00	CARBON 750 5% 1/6W
R108	1-247-859-00	CARBON 15K 5% 1/6W
R109	1-247-878-00	CARBON 91K 5% 1/6W
R110	1-247-871-00	CARBON 47K 5% 1/6W
R111	1-247-855-00	CARBON 10K 5% 1/6W
R112	1-247-845-00	CARBON 3.9K 5% 1/6W
R113	1-247-847-00	CARBON 4.7K 5% 1/6W
R114	1-247-839-00	CARBON 2.2K 5% 1/6W
R115	1-247-839-00	CARBON 2.2K 5% 1/6W
R116	1-247-855-00	CARBON 10K 5% 1/6W
R117	1-247-839-00	CARBON 2.2K 5% 1/6W
R118	1-247-819-00	CARBON 330 5% 1/6W
R119	1-247-787-00	CARBON 15 5% 1/6W
R120	1-247-787-00	CARBON 15 5% 1/6W
R121	1-247-855-00	CARBON 10K 5% 1/6W (SERIAL NO. 13,801 AND LATER)
R122	1-247-855-00	CARBON 10K 5% 1/6W (SERIAL NO. 13,801 AND LATER)
R201	1-247-871-00	CARBON 47K 5% 1/6W
R202	1-247-891-00	CARBON 330K 5% 1/6W

ELECTRICAL PARTS

Ref.No.	Part No.	Description
R203	1-247-845-00	CARBON 3.9K 5% 1/6W
R204	1-247-903-00	CARBON 1M 5% 1/6W
R205	1-247-863-00	CARBON 22K 5% 1/6W
R206	1-247-842-00	CARBON 3K 5% 1/6W
R207	1-247-828-00	CARBON 750 5% 1/6W
R208	1-247-859-00	CARBON 15K 5% 1/6W
R209	1-247-878-00	CARBON 91K 5% 1/6W
R210	1-247-871-00	CARBON 47K 5% 1/6W
R211	1-247-855-00	CARBON 10K 5% 1/6W
R212	1-247-845-00	CARBON 3.9K 5% 1/6W
R213	1-247-847-00	CARBON 4.7K 5% 1/6W
R214	1-247-839-00	CARBON 2.2K 5% 1/6W
R215	1-247-839-00	CARBON 2.2K 5% 1/6W
R216	1-247-855-00	CARBON 10K 5% 1/6W
R217	1-247-839-00	CARBON 2.2K 5% 1/6W
R218	1-247-819-00	CARBON 330 5% 1/6W
R219	1-247-787-00	CARBON 15 5% 1/6W
R220	1-247-787-00	CARBON 15 5% 1/6W
R221	1-247-855-00	CARBON 10K 5% 1/6W (SERIAL NO. 13,801 AND LATER)
R222	1-247-855-00	CARBON 10K 5% 1/6W (SERIAL NO. 13,801 AND LATER)
R301	1-247-859-00	CARBON 15K 5% 1/6W
R302	1-247-831-00	CARBON 1K 5% 1/6W
R303	1-247-845-00	CARBON 3.9K 5% 1/6W
R304	1-247-855-00	CARBON 10K 5% 1/6W
R305	1-247-855-00	CARBON 10K 5% 1/6W
R306	1-247-855-00	CARBON 10K 5% 1/6W
R307	1-247-855-00	CARBON 10K 5% 1/6W
R308	1-247-855-00	CARBON 10K 5% 1/6W
R309	1-247-879-00	CARBON 100K 5% 1/6W
R310	1-247-831-00	CARBON 1K 5% 1/6W
R311	1-247-827-00	CARBON 680 5% 1/6W
R312	1-247-849-00	CARBON 5.6K 5% 1/6W
R313	1-247-847-00	CARBON 4.7K 5% 1/6W
R314	1-247-855-00	CARBON 10K 5% 1/6W
R315	1-247-807-00	CARBON 100 5% 1/6W
R316	1-247-807-00	CARBON 100 5% 1/6W
R317	1-247-838-00	CARBON 2K 5% 1/6W
R318	1-247-823-00	CARBON 470 5% 1/6W
R319	1-247-859-00	CARBON 15K 5% 1/6W
R320	1-247-809-00	CARBON 120 5% 1/6W
R321	1-247-855-00	CARBON 10K 5% 1/6W
R322	1-247-855-00	CARBON 10K 5% 1/6W
R323	1-247-831-00	CARBON 1K 5% 1/6W
R324	1-247-855-00	CARBON 10K 5% 1/6W
R325	1-247-855-00	CARBON 10K 5% 1/6W

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ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R326	1-247-807-00	CARBON	100	5%	1/6W
R327	1-247-815-00	CARBON	220	5%	1/6W
R328	1-247-819-00	CARBON	330	5%	1/6W
R329	1-247-819-00	CARBON	330	5%	1/6W
R331	1-247-875-00	CARBON	68K	5%	1/6W
R332	1-247-855-00	CARBON	10K	5%	1/6W
R333	1-247-871-00	CARBON	47K	5%	1/6W
R334	1-247-855-00	CARBON	10K	5%	1/6W
R335	1-247-855-00	CARBON	10K	5%	1/6W
R336	1-247-833-00	CARBON	1.2K	5%	1/6W
R337	1-247-831-00	CARBON	1K	5%	1/6W
R338	1-247-831-00	CARBON	1K	5%	1/6W
R339	1-247-855-00	CARBON	10K	5%	1/6W
R340	1-247-807-00	CARBON	100	5%	1/6W
R341	1-247-849-00	CARBON	5.6K	5%	1/6W
R342	1-247-847-00	CARBON	4.7K	5%	1/6W
R343	1-247-855-00	CARBON	10K	5%	1/6W
R344	1-247-831-00	CARBON	1K	5%	1/6W
R345	1-247-855-00	CARBON	10K	5%	1/6W
R346	1-247-855-00	CARBON	10K	5%	1/6W
R347	1-247-855-00	CARBON	10K	5%	1/6W
R348	1-247-855-00	CARBON	10K	5%	1/6W
R349	1-247-855-00	CARBON	10K	5%	1/6W
R601	1-214-778-00	METAL	110K	1%	1/4W
R602	1-214-775-00	METAL	82K	1%	1/4W
R603	1-247-855-00	CARBON	10K	5%	1/6W
R604	1-247-881-00	CARBON	120K	5%	1/6W
R605	1-247-887-00	CARBON	220K	5%	1/6W
R606	1-247-871-00	CARBON	47K	5%	1/6W
R607	1-247-855-00	CARBON	10K	5%	1/6W
R608	1-247-871-00	CARBON	47K	5%	1/6W
R609	1-247-855-00	CARBON	10K	5%	1/6W
R610	1-247-855-00	CARBON	10K	5%	1/6W
R611	1-247-871-00	CARBON	47K	5%	1/6W
R612	1-247-869-00	CARBON	39K	5%	1/6W
R613	1-247-871-00	CARBON	47K	5%	1/6W
R614	1-247-849-00	CARBON	5.6K	5%	1/6W
R615	1-247-819-00	CARBON	330	5%	1/6W
R616	1-247-819-00	CARBON	330	5%	1/6W
R617	1-247-819-00	CARBON	330	5%	1/6W
R618	1-247-819-00	CARBON	330	5%	1/6W
R619	1-247-827-00	CARBON	680	5%	1/6W
R620	1-247-865-00	CARBON	27K	5%	1/6W
R621	1-247-867-00	CARBON	33K	5%	1/6W
R622	1-247-903-00	CARBON	1M	5%	1/6W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R623	1-247-823-00	CARBON	470	5%	1/6W
R624	1-247-863-00	CARBON	22K	5%	1/6W
R625	1-247-827-00	CARBON	680	5%	1/6W
R626	1-247-831-00	CARBON	1K	5%	1/6W
R627	1-247-863-00	CARBON	22K	5%	1/6W
R701	1-247-871-00	CARBON	47K	5%	1/6W
R702	1-247-871-00	CARBON	47K	5%	1/6W
R703	1-247-871-00	CARBON	47K	5%	1/6W
R705	1-247-855-00	CARBON	10K	5%	1/6W
R706	1-247-871-00	CARBON	47K	5%	1/6W
R707	1-247-847-00	CARBON	4.7K	5%	1/6W
R901	1-247-881-00	CARBON	120K	5%	1/6W
R902	1-247-863-00	CARBON	22K	5%	1/6W
R903	1-247-879-00	CARBON	100K	5%	1/6W
RV301	1-228-104-00	RES, VAR, CARBON 20K/20K			
RV302	1-226-753-00	RES, ADJ, SOLID 47K			
RV601	1-226-774-00	RES, ADJ, METAL GLAZE 47K			
RV602	1-226-774-00	RES, ADJ, METAL GLAZE 47K			
RV603	1-226-753-00	RES, ADJ, SOLID 47K			
RV604	1-226-753-00	RES, ADJ, SOLID 47K			
RV605	1-226-710-00	RES, ADJ, SOLID 10K			
S301	1-554-142-00	SWITCH, SLIDE			
S601	1-554-078-00	SWITCH, SLIDE			
S701	1-552-174-00	SWITCH, PUSH			
S702	1-552-174-00	SWITCH, PUSH			
S703	1-552-174-00	SWITCH, PUSH			
S704	1-552-174-00	SWITCH, PUSH			
S705	1-552-174-00	SWITCH, PUSH			
S706	1-554-297-00	SWITCH, LEAF			
S707	1-554-123-00	SWITCH, SLIDE			
S901	1-553-198-00	SWITCH, LEAF			
S902	1-553-226-00	SWITCH, LEAF			
S903	1-553-226-00	SWITCH, LEAF			
X601	1-567-089-00	OSCILLATOR, CRYSTAL			
X701	1-567-094-00	VIBRATOR, CERAMIC			

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